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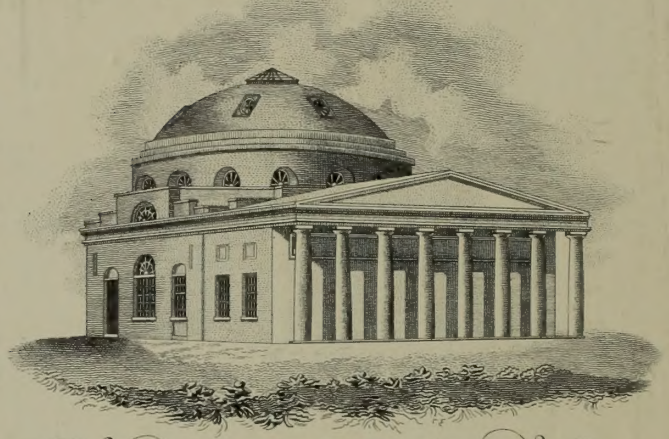

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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UNIVERSITY OF MARYLAND

THESES

1864 (b)

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Roberts, Charles E.	Yellow Fever	(No title page)
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UNIVERSITY OF MARYLAND

THESES

1864 (b)

Richardson, Henry	Dyspepsia	60p.
Nelson, George W. H.	Chemical and Microscopical Examination of Urine	28p.
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Watts, Henry H. R.	Treatment of Gangrene with Bromine	13p.
Monmonier, Louis A.	Menstruation	32p.
Shueen, Joseph R.	Phthisis Pulmonalis	37p.
Weedon, John H. W. G.	Typhoid Fever	34p.

An Inaugural dissertation,

on

Dyspepsia

Respectfully submitted to the
examination of the
Provost, Regents and
Faculty of Physic
of the
University of Maryland,
for the
Degree of
Doctor of Medicine

by

Henri Richardson
West Feliciana La.

1864.

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Gentlemen:

Upon having gone through the preliminaries essential for a Student of Medicine - for the degree of Doctor of Medicine, I am now about to fulfil that requirement of the School, which is, that each and every Student should present to the Dean an inaugural dissertation upon some subject connected with the Medical Science. Like those who have gone before me, I must confess, my ingenuity has been taxed for the past six months, in reference to a subject for the occasion. In making a selection I have chosen one which should not be the less interesting to the young practitioner, on account of its frequent-

occurrence than for its numerous complications. Previous to discriting the disease, I desire to speak a few words of respection behalf of my worthy preceptors. Whilst deeply impressed with the magnitude of the subject to be considered, and my own inability to do it justice, I should at the same time be recreant to every ennobling sentiment of humanity, if I did not acknowledge my gratitude to my Preceptors, for their uniform, courtesy, consideration, and patience, exhibited during my Collegiate course. Though their efforts have been often repaid with inattention, yet with unwavering perseverance, they have striven to inculcate the great principles of a Science, upon whose perfection depends,

the Safety of Society, and whose terrible responsibility is only perfectly known to God. Though often baffled by inattention they have never ceased their vigilance, though met with ingratitude — have never suffered themselves to be discouraged, though often foiled by stubborn ignorance, yet with indiscriminate zeal have persevered to instill the products of knowledge and experience, in those, who have intrusted themselves to their care. Whilst thus acknowledging the gratitude I owe to my Superiors, I appeal to their leniency, in the Criticism of my Thesis, well aware that in comparison with their attainments, my feeble efforts must sink to insignificance. It cannot be expected of one, just entering

the verge of Medicine, to advance new theories, or base an opinion against the experienced Author or Lecturer. The Subject I propose is "Dyspepsia," and will proceed to consider it.

Dyspepsia.

As this is a disease making its appearance among all classes, especially the free indulger, and imprudent masticator, it may with propriety be termed, a depression or diminution of the functions of the Stomach, or in other words, a derangement in the natural process of digesting and assimilating our food. Previous to making mention of the most prominent symptoms of this very prevalent malady of civilized life, it becomes me to speak of the changes

which the food undergoes in the Stomach. The first alteration of the food takes place in the mouth. The solid articles are submitted to the action of the teeth, whereby they are divided and crushed, thus becoming mixed with the fluid of the mouth are reduced to a soft pulpy consistence, capable of being swallowed. The general effects of the food in the Stomach, are its conversion into Chyme, a substance of various composition, according to the nature of the food; yet always representing a grumous consistence, with the undigested portion mixed in with a more fluid substance, possessing a strong disagreeable acid odor and taste. Tender and moist substances offer less resistance to the

Gastric juice, than tough hard and dry ones, simply because they may be thoroughly penetrated with it. but the readiness with which a substance is acted upon by the Gastric juice, does not necessarily imply the degree of its nutritious property, for a substance may be nutritious yet on account of its toughness, difficult to digest, and on the other hand, many substances easy of digestion, contain comparitively a small quantity of nutriment. For a substance to be nutritious, it must be capable of being assimilated to the blood; and if soluble be digestible by the Gastric juice or some secretion of the intestinal canal.

Many circumstances besides the nature of the food, have a tendency to influence the process of Chymification; among them are the quantity

of food taken; the stomach should be fairly filled, not distended; the time that has elapsed since the last meal; which should be at least enough for the Stomach to be quite clear of food; the amount of exercise previous and subsequent to the meal, gentle exercise being favorable, over exertion injurious to digestion, the state of the mind, the tranquillity of temperature apparently essential to a quick and due digestion.

We learn from Dr. Beaumont's experiments upon Dr. Martin's stomach, the time required for the digestion of all usual articles of food. Among the substances most quickly digested were Rice & Soup both of which were chymified in an hour. Eggs, salmon, trout, apples, and venison were digested in an hour and a half, tapioca, barley, milk and fish in two hours; turkey, lamb & potatoes & pig in two hours and a half, while

beef, and mutton, required from three hours to three and a half, and both were more digestible than Veal. Hams were like mutton in their degree of digestibility. Animal substances were in general converted into Chyme more rapidly than Vegetables. Under ordinary circumstances from three to four hours may be taken as the average time occupied by the complete digestion of a meal. Finally the Chyme is propelled by degrees into the Duodenum, by the transverse bands of the muscular fibres, embracing the Pyloric extremity of the Stomach. The essential change which the Chyme undergoes after leaving the Stomach, appears to consist of its separation into two parts, viz: into Chyle which is taken up by the lacteals, and into excrements which is discharged from the body. After having discribed the

Physiological phenomena of digestion, I will review 1st the Symptoms characteristic of the disease; 2nd the Causes, 3rd Diagnosis & Prognosis, 4th the Dietetic & Medical treatment.

The first and most pronounced of these Symptoms is Anorexia, want of appetite, the patient experiences great disgust for food. He is warned not to take too much food and refrains instinctively from certain kinds. But sometimes we meet with the reverse; the appetite is ravenous and perverted; this is not a natural hunger, — instead of this, the patient experiences an uneasy sensation about the Stomach, intense pain about the Epigastrium, — nausea and vomiting are of frequent occurrence; the food being rejected soon after a meal. The matter thrown up being frequently mixed with bile, and the patient will ascribe the

Whole to an overflow of bile, while the Secretions of the liver are concerned in the appearance of bile being due to some perverted action of the Duodenum. The phenomena heretofore maintained belong more especially to the Stomach. There are numerous other Symptoms elsewhere detailed, such as headache, a sense of heaviness about the head, impairment of vision, pain and a feeling of coldness between the Shoulders, uneasiness about the throat, some irritation of the gums and fauces. The patient is depressed in Spirits, perverse, indifferent as to a reply, shunning no disposition to exertion, and will imagine himself a Psychic, and a subject of a thousand diseases. The patient is disturbed in sleep, the tongue is furred especially towards morning, its papillae are distinct and injected

though in many cases the tongue is clean and indented. The bowels are most always constipated or irregular, and a sense of oppression comes on, soon after eating, vomiting ensues, followed by a throbbing sensation of the abdomen, and passing over the whole body with languor and drowsiness and sometimes a faintness. When undigested food passes into the Pylorus and Cardium, violent cramp or spasmodic pain is produced. The surface is usually dry and of an irregular temperature, the feet and hands are colds, but sometimes hot & burning, particularly at night. In debilitated cases, instead of dryness of the skin there is a copious perspiration. The Urine is variously affected, sometimes scanty and high colored, sometimes copious, limped and colorless. The pulse is also altered, in some cases quite

natural, while in others more or less disordered, being too slow or too frequent or altogether irregular. Indigestion is frequently attended with no pain, while again it is tormenting. Cardialgia and Gastrodynia are of frequent occurrence. Cardialgia is that less severe, but more permanent uneasiness commonly termed heart-burn. Gastrodynia presents itself in a more severe form, but more transient — and is generally called Spasm or Cramp of the Stomach. There still remains another form of Dyspepsia, worthy of consideration, which has been properly termed Pyrosis or Water Brash. This is of frequent occurrence. It has been described by Cullen and others, as consisting in the effusion of a considerable quantity of watery fluid in the Stomach. This fluid being afterwards

or regurgitated in the mouth. It more com-
mon among the lower classes than the o-
ther, and among women than men. This
watery fluid is formed in large quantities, as much
as half a pint has been known to be ejected at one
time from the Stomach. It generally occurs when
the Stomach is empty, and is attended with a
sense of pain, and contraction at the Spine and
Epigastric region. Water Brash occasionally al-
ternates with Gastralgia, the tongue may be clean
the pulse normal, the patient not visibly nourish-
ed, or animated. The period at which the dis-
charge of fluid, takes place varies as to the time and frequency
of its occurrence. The fluid has been found to be
Alkaline but is generally neutral. The appear-
ance of the Stomach, in cases which have been exam-
ined after the death of those who suffered long from

Pyrosis is variable; sometimes the mucous membrane has been found perfectly natural or of a uniformly morbid color; red-brown or darkened. In a case which came under Dr. Watson's observation, and in which not less than three pints of the tasteless liquid was brought up every day, the Stomach after death, was found to all appearance, perfectly healthy; but it had been pressed upon by an enormous liver. At other times the mucous follicles are observed to be remarkably developed and pale, and again together with the enlargement we see vascularity; again there is hypertrophy of the mucous membrane, or thick and adherent mucous exudation, with or without specific marks of inflammatory action. The inference to be deduced from these different states and appearances, is that this disorder is rather sym-

stomatic than primary, and are not like other forms of Dyspepsia, it exhibits frequent complications, which are not essential to the production of the ordinary symptoms. The Physician must not expect to meet with all the above symptoms in every case, they are of infinite diversity, there are scarcely two cases in which striking difference may not be observed. Having made mention of the prominent symptoms of indigestion, I must now devote my attention to the principal causes which are now few.

Causes.

Dyspepsia arises first from an abnormal condition of the mucous membrane, and its secretions, secondly from an impediment in muscular movement, thirdly from the state of vascular supply, fourthly from the condition of

Pancreatic system, and lastly from the character and changes which take place in the food. Several of the above causes may be combined some lead to a disease of a transient nature which others are irremediable. Dyspepsia arising from an abnormal condition of the mucous membrane, and its secretions must either depend upon the Gastric juice being deficient in supply or from it being irregularly secreted, or in excess, and changed in character as in Phthisis and Gout. The deficiency of Gastric juice may also be relative rather than an actual one. A greater amount of food being taken than needed for the system, or than can be dissolved remains undigested, and acting as an irritant, becomes a fertile source of Dyspepsia. The crude substances not only

disturbs the stomach and its secretions. but if it be allowed to pass the Pylorus, it disturbs the whole intestinal canal; and fermentative changes are set up. The deficient secretion produces various symptoms, and may arise from many causes. After intemperance in drinking, the gastric mucous membrane becomes over stimulated, the portal system engorged, and the liver congested and disordered. From this state secretion does not take place in the Stomach, and Dyspepsia is produced we may easily account for the sallow complexion, the furred tongue the impaired appetite, the mental depression or headache, and in some cases the pain at the scorbiculis cordis and between the shoulders, and in the bowels, and diarrhea supervenes, where excess is hab-

itual more permanent results follow, but more modified, resembling those from diminished secretion. The patient is hypochondrical - flatulence - spasmodic cramps in the abdomen, pain across the chest, the papillae of the tongue being distinct and injected, disturbed vision, loss of sleep, the compressible pulse, and constipated bowels, have their origin from this disorder? In this condition also, food taken into the stomach remains undigested and there is a sense of weight about the chest. Deficient secretion does not arise from vascular plethora, but the reverse), sedentary habits, want of exercise, mental distress, excitement, anxiety, and an insufficient supply of wholesome food are all prolific causes. Besides the abnormal condition of the gastric juice already mentioned, there are two others

There are two others which must be considered reproductive of Dyspepsia. In uric acid diathesis or in gout we find functional ailment of the Stomach, flatulence, acidity, nausea, flushes of heat, pain in the left Hypochondrium, sometimes vomiting and pain at the pit of the Stomach. The disease appears to be produced by imperfect assimilation, as explained by Dr. Prout. The function of other viscera are altered, as that of the liver and kidneys. The visage becomes pale, the urine high colored, and often deposit will take or contain an excess of uric acid. The heart and sympathetic nerves are affected, there is an irregularity of pulse, or there may be vertigo or transient amaurosis, the blood contains lithic acid as shown by Dr. Garrod, or other elements from the decomposition of tissue and

in this state the gastic juice is secreted in an abnormal condition. This form of Dyspepsia is easily produced, where hereditary tendency exists, but even where this is not the case it may it may be produced by over stimulating, excess or other irregularities. In Pulmonia, the vomiting and nausea which are amongst its most common symptoms are generally considered as sympathetic, and that the renal plexus of nerves in their connection with the Semilunar ganglion, with the pneumagastric nerves, and gastric plexuses, lead to vomiting and nausea This is probably in a great measure the case; but another cause has been mentioned, and I think very correctly, the altered condition of the blood, and the excess of urea which it contains lead to that substance being poured out with the

the normal gastric juice, which acts as an irritant in the Stomach. There are other forms of mal assimilation which occasion Dyspepsia; and we find indications of this in some of the varieties of cutaneous diseases — no organ sympathizes more closely with the Stomach than the Skin; and we find this in every period of life, — thus in infants we have Stoophulus from gastric irritation; in adults some of the forms of irrhœnia and roseola, in advanced life eczema & prurigo. It not unfrequently happens that flatulence is produced by the formation of gas in the Stomach. In cases of Hysteria or prolonged abstinence from food, the Stomach becomes painfully distended, eructations take place and the power of digestion diminished. It has been supposed that gas is effused from the Cappillaries, but of this we

have no proof; or whether it arises from a considerable quantity of mucus being poured out which is decomposed by gastric juice, and this as produced is merely hypothetical; the flatulence is generally preceded by slight pain or a gnawing sensation at the Scrobiculus cordis: a full meal in this case probably not be digested, & the flatulence be prolonged and colic produced. The fermentation of the contents of the Stomach, and the symptoms consequent upon it, are due partly to an abnormal State of the secretions, in part to the muscular movements being impeded, & the pylorus being obstructed, and sometimes to the character of the food itself. The second division or the impeded movement of the Stomach, has not been sufficiently considered as a cause of Dyspepsia: we observe it in Hernia, when the omentum is fre-

ed and the Stomach is dragged from its position.
The habit of tight-lacing which our ladies are
willing to admit of, is a fertile source of Dyspepsia.
In most cases the mischief is done in early life,
about the age of 14 or 15 when development is
taking place. The ribs are scarcely allowed to
expand, and the Stomach is gradually pulled
into a vertical position, neuralgic pains of the
side, flatulent distension of the Stomach, are
both present in this state of affairs. Digestion re-
quires that the nutriment should travel round
round the Stomach, and it should after being con-
verted into Chyme, pass into the Duodenum, but when
the Stomach is placed vertically, its semi-digested con-
tents, are more likely to be impelled at once into the
Pylorus — the Dyspepsia which is so common in
those who spend many hours over the desk (writing

reading, or in any constrained position of the head
In cooks, shoemakers tailors, and dressmakers
we find this continued unnatural position, pro-
ductive of aggravated indigestion, increased if not
true in many cases by irregular, and intemper-
ate habits. An appreciation of the nervous
system is important in studying disease of the
Stomach. Other organs induce disturbance
of this viscus, by their nervous and sympath-
etic relations with it. These in all cases may
be referred to the Cerebro Spinal or the Sympath-
etic nerve. Another form of Dyspepsia arising
from the nervous system, has been noticed in ref-
erence to the deficiency of the Gastric Juice.
Dyspepsia in reference to Hypochondriasis
in an overwrought Brain, or an imperfect develop-
ment of the Cerebrum is extremely distressing

to the patient and trying to the Physician. Whatever calls off the nervous energy from the Stomach and concentrates it elsewhere, favours the production of the disease. Excessive and exhausting exercise has the same effect. Among the causes of Dyspepsia which yet remain to be enumerated are those which have an immediate depressing effect on the Stomach; such as the sedative narcotics — tobacco the drinking of too much cold water when the stomach has but little power of reaction. Dr Warfield Jones is of the opinion that Pyrosis is a chronic catarrh of the mucous membrane of the Stomach — while Dr. Chambers regards the Oesophagus as its source. The disease comes on after the continued use of Oatmeal, hence more common in the North. It follows symptoms of Gastritis, and many

such cases present themselves at Hospitals & Dispensaries. In some persons affected with this disease, the breath becomes offensive, resembling that caused from carious teeth, diseased tonsils and ulcerated nares. This is due to the putrifactive decomposition of food, retained in the Stomach undigested. From what has been said, it is very evident that pure Dyspepsia consists essentially either in depression of the Stomach arising from the withdrawal of its ordinary supply of nervous influence, or from some immediate sedative influence upon it; or in positive debility from the loss of excitability consequent upon excessive stimulation. In either case the Stomach performs its appropriate function less efficiently.

Diagnosis.

It frequently baffles the Skill of the Physician to make a correct diagnosis of this disease - as it frequently occurs in conjunction with some other derangements of the Stomach, such as Gastralgia or Gastrodynia and chronic gastritis, which latter nearly always exists. It is important to distinguish this latter affection from Dyspepsia, and to be able to recognize inflammation, when it takes place in the course of the latter affection. In Chronic Gastritis, the pain is upon the whole more severe - the Epigastric tenderness greater and more constant - vomiting more frequent; the pulse more tense, and generally more accelerated in this complaint. The tongue is frequently red with more papillae, or altered surface

much is seldom the case in pure Dyspepsia. Hot and stimulating indulgencies increase the uneasiness in the inflamed stomach — while they often afford relief to the Dyspeptic — and food is generally more acceptable to the latter, than formerly — When the matter vomited is mucus or blood or resembling coffee ground — the existence of Chronic gastritis may be inferred. Febrile action and diarrhea are much more common in gastritis than in dyspepsia. When therefore is a case of indigestion, the various symptoms which we have mentioned increase or become developed there is good evidence of the supervention of Chronic gastritis. But Dyspepsia with its multiform symptoms, may be and often is, entirely independent of inflammation — the symptoms by which we are to diagnose the malady are often obscure and uncertain.

Prognosis

The prognosis with regard to cure is generally unfavorable. Pure uncomplicated Dyspepsia seldom proves directly fatal. In a vast majority of cases the patient either recovers entirely or so far as to have only occasional returns, upon a renewed application of the cause; while in other the disease which was merely functional becomes organic. The principal danger from Dyspepsia however is, that the reduced state of the System, may disable it from surmounting other diseases attendant upon it. The predisposition to Phthisis may be favored by the debility attendant upon Dyspepsia. As it is the same condition from any other cause, but the former disease seldom or never is the direct result of latter. If the digestive process is altogether-

checked, and no new supply of nourishment is absorbed or assimilated, no fresh restoration of the waste entailed by the exercise of every function, life must sooner or later cease. No disease in its ravages presents a spectacle more distressing to witness than the gradual wasting away of the frame if the cessation of life itself is from the non supply of food and from the disease now under consideration. While noticing the diagnosis I neglected to speak of a condition which might be mistaken for Pyrosis. and is found to arise in conjunction with a colloid cancer — watery fluid being regurgitated in the mouth. It is important to bear this in mind, in the diagnosis of this disease — with ordinary Pyrosis the symptoms are sometimes so severe and persistent, as to cause hesitancy even in our prognosis. Thus it can be seen

that the whole system sympathizes with the disordered alimentary canal. I will conclude the Diagnosis and Prognosis by simply remarking that the Physician cannot be too cautious in making his diagnoses and never be too hasty in expressing his opinion concerning the Prognosis of this disease.

Dietetic treatment.

The rules of diet the administering of proper and suitable food, are the most requisite points in the treatment of this disease — without these medical aid can accomplish but little. Frequently the practitioner may be consulted by persons laboring under this disease, to know what they may eat or drink — it will often baffle his skill and experience to lay down any general rule adapted to every case — what would be beneficial to one man would act as poison to another. — Then again advice

is scorned the diseased man exculpates himself and censures you, for his own imprudence, and, rash acts. For the average number of cases - Mutton is most appropriate of all animal food, as it is most easily digested - Some contend that animal food is digested with more facility than vegetable - a much smaller quantity is needed for the human Stomach, and it does not so readily generate acidity The all from the Stomach has its idiosyncrasies, and the peculiarities are so numerous that articles easily digested by one will often prove indigestible by another. - All meats which have been hardened by culinary art should be strictly forbidden to bad digesters - such as cured hams, smoked beef, Sausages and dried tongues. All raw vegetables must be eschewed - such as - salads, cucumbers, & pickles. - Man is omnivorous but his organs of

digestion bear a greater resemblance to those of the Carnivorous than Granivorous race. It is an absurd idea to let the patient to refrain altogether from the use of animal food. But simultaneously you should endeavor to impress upon those whom you may have to treat to abstain from all articles difficult of digestion, whether animal or vegetable. It is injudicious to inform the patient, that all vegetable food produces more flatulence in a weak stomach, or is more tardy of digestion than animal food. A good plan to adopt I think is to advise the patient to take a mixture of well roasted or boiled flesh or fowl with a moderate portion of thoroughly cooked vegetables. The more soluble food is in water, the less irritating it is, and much more suitable for the functions of the Stomach. The flesh of very young or very old is usually less

digestible than the same in the intermediate stage of life. Fish is generally considered difficult of digestion – especially shell fish – such as clams or lobsters should be avoided by the dyspeptic. Puddings made with butter or fat – cream, bread and all sorts of dressing made with sugar or wine should be strictly forbidden. Vegetable acids have been found to be very injurious, and the fruit containing them in large quantities, should be avoided. The most pernicious articles in excess are acid – malts or spirituous drinks, especially in the shape of punch, or strong green tea or coffee. – exclude vegetable matter if it crude or flatulent – gross animal food, whether fresh, salt, or smoked – many condiments, and nearly all the things included in the term dessert. Taking drugs habitually, conduces to the same end as the frequent repetition of emetics – purgatives and

narcotics. Tampering with any medicine which is so much the practice with people of valetudinary dispositions, is very detrimental. Every ache whether real or imaginary must be relieved by a recurrence to some supposed remedy 'till finally the powers of the stomach are worn out, and derangement either functional or structural takes place. We have all seen the detrimental effects of that vile weed - tobacco - which the members of all professions - the clergy among the foremost, consume. The list of allowable substances should be scanty. Among those of vegetable origin, are wheaten bread, when light or stale or free from acid - crackers nicely soaked - rice well boiled - potatoes thoroughly cooked. Fresh milk is easily digested, and forms an excellent diet for dyspeptics, especially when strong animal food is considered hazardous in con-

sequence of existing or suspected gastritis. Butter has been objected to by some authors. I cannot see why except it badly prepared, or left to become rancid. As the flesh of wild animals is considered easier of digestion than that of tame good venison being the most digestible of all meats it may used with advantage. In eating fowl care should taken to avoid the skin and fat. Condiments such as salt, mustard, black pepper and capsicum, should be used with great moderation - they have been regarded as favorable to digestion. The medical man will be frequently consulted in reference to what drinks would be beneficial, or which have a tendency to aggravate the disease. I would upon the whole recommend cool water. The vinous and spiritous liquors though oftentimes afford temporary relief, are positively injurious not only account of

their stimulating effects - but from constant use the patient may acquire intemperate habits - if used at all it should be at dinner. Among the wines madeira and Sherry should be preferred - and brandy among the Spiritous. As much depends upon the proper mode of taking food as in its selection, it is consistent to mention it here. The patient should have regular hours for meals, abandon the habit of eating a little, and often through the day - particularly at bed-time. As rest is essential to the Stomach, in order that its functions may be performed as to the body. When the interval between meals is long and the patient suffers from an empty stomach, then he may with propriety take a small quantity of nourishment. Simultaneously great care should be taken not to overload the Stomach - to avoid which the

patient should eat slowly and masticate well. A meal should never be taken immediately after fatiguing exercise. The exercise should be enjoined upon the Dyspeptic, as it is conducive to the cure of the disease. Walking, riding, and even running or leaping should be practised by the young especially but always avoiding exhaustion. The best exercise for the Dyspeptic, is riding on horseback if convenient if not in a coach, over rugged roads, or stone turnpikes. If his circumstances be too meagre, to admit of a horseback or coach ride, he may walk moderately every day and enjoy the refreshing breeze of morn. When the weather is too inclement preventing the Dyspeptic from leaving home, they should contrive some indoor exercise, such as attending

domestic affairs which always afford abundant employment to the female. The patient should be moderate and regular in all his habits; he should retire early to bed, and rise early in the morning — never permitting business study or pleasure to encroach upon his rest. He should sleep in a well ventilated room, always paying great attention to cleanliness. Bathing must be put in requisition, aided by friction so as to give tone to the skin — the cold bath being preferable to the warm; the mustard being more suitable than either — the patient must not remain in the water too long. Relaxation from study and from the cares and anxieties of harrassing business, is essential to the cure of Dyspepsia — if the mind should be occupied, as in no disease is it more apt to prey upon itself than in this when whit-

ly surrended to its own caprices. All mental depression should be removed as far as possible, travelling, is the most effectual mode of accomplishing this, uniting the advantage of exercise, the enjoyment of pure air, and the relaxation from business, as if directed to some watering place affords the additional advantage of some efficient medical agent — to render a journey permanently useful, it must be a long one — hence a voyage to Europe or some foreign country — an absence of six months or a year are the most effectual cures for Dyspepsia.

The Medical treatment.

Two very important indications are to be looked after in the medical treatment of this disease. First — to prevent or remove constipation secondly

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The Medical treatment.

Two very important indications are to be looked after in the medical treatment of this disease. First — to prevent or remove constipation secondly

to make a moderate but stimulant impression upon the Stomach. To accomplish the first we must resort to laxatives and mild purgatives, and to meet the latter indications, tonics must be used with discretion. We are advised by some authors to prevent constipation by diet alone but I regard this as impossibility, for the articles of food best calculated to produce this effect are almost always inadmissible, such as fruit and vegetables from their difficulty of digestion, and tendency to occasion acidity and flatulence. Unbolted flour may be used by some, as it is said to possess laxative qualities, but is not well adapted to all Stomachs, and is ~~not~~ frequently fails to produce the desired effect. In the selection of medicinal remedies, we should choose those which have no tendency to weaken the Stomach, but

those possessing tonic with aperient properties. Pulv. rhei and Aloes, may may be selected as the most suitable. They may be given separately or combined. Rhubarb may be used in all cases. Aloes in all, when there is no tendency to piles. I have seen pills composed of the two produce beneficial results. Soon after entering the Baltimore Infirmary, a patient was admitted into St. Luke's ward presenting the symptoms of Dyspepsia. Our very worthy medical attendant Dr. Richard McSherry, prescribed pills composed of the following ingredients viz. Pulv. rhei pulv. aloes Ferri sulphat. aa XII grs. Ex. Hyosciam grs III m. ft. mass in pill & dividend one morning, noon and night. The patient was kept upon this treatment until constipation was removed and distress subsided. At the next visit he was put upon the following

prescription — Soda - Bicarb ʒ ii - morphia - sulp - gis ii - med - acidum Hydrocyanic grs XII Aqua ℥ ii Cochlea magnum - ter in die. When I visited the ward next morning the patient expressed his gratitude by telling me, that he felt better than he had done for months & A few days after he left the house partially relieved of the distressing symptoms. To procure regular alvine evacuation after the bowels have been unloaded by purgatives, and to meet the special exigencies of over-fulness and accumulation, an enema of tepid water, morning and evening, or this failing the addition of aperients — we must bear in mind and unceasingly impress upon the patient the fact that permanent relief, and the establishing of a healthy habit, can only be procured by Hygienic means — a proper selection of articles of food, reference being had to both their digestibility

and the insulin. The Physician will frequently afford great relief by combination of medicines to meet different indications. Thus he may associate the bitter infusions with the aromatics or with the Cathartics when a laxative effect is desired. For the removal of the atonic state of the Colon, and Constipation, the union of the bitter, as the extract of Gentian or Quassia with a purgative should be directed. The same good effect may be expected to follow the combination of a mineral tonic, with a purgative, to which a warm gum as Myrrh or an antispasmodic, as Assafoetida can be added, as in the following —

℞. Pulv. Aloes. G. Myrrhae aa ʒss Ferri Sulphas ℈i — Syrup simplex q.s. et ft. mass. in pil xx dividend — s — take two before breakfast — or this —

℞. Ex-Gentian — Pulv. gum. fetid: aa ʒi — Aloes ʒss m-

oxide-syrup: q.s. Ast-mass-in pil xi: dividend. S.
two or three twice daily. Quinae-Sulphas with
Aloes in pill-or with pills composed of Aloes &
Myrrh, exerts frequently the best effects in con-
stipation, or in a torpid state of the system in gen-
eral. When there is an excess of acid and Alkaline
carbonate may be advantageous. The hepatic
secretions demand some attention - if diminished
it is best corrected by the mercurial pill or Calomel
either alone or in conjunction with tonics or purga-
tives. Mass Hydrargi - given at bed-time -
in doses of from three to five grains, will exert a
very calming effect. A still milder preparation
is the hydrargyrum cum creta: or if a combi-
nation be required which shall act on the dis-
eased mucous membrane, and the skin at the
same time the Mass hydrarg. et ipecacuanha in

in the proportion of three grs. of the first and half of the latter in pill two or three times during the day will be found to answer our expectations very happily. Fara sacum as auxiliary to Mercury, and in the opinion of some a substitute for it displays every now & then a very sensible effect; in soothing the mucous membrane. The Extract may be given in infusion of [illegible] or Orange peel, or the compound decoction of Sarsaparilla and [illegible] in Camphor water, to which may be added according to the [illegible] a small quantity of Potassae nitras or Aloes. The following is [illegible] administration. ℞. Extract Taraxaci ʒii Potassae nitras ʒiii Spiritus aether: nitrici ʒi Infusi [illegible] ʒii [illegible] Dose a table spoonful [illegible] [illegible] [illegible] [illegible]

[illegible]
and Solution of Chlorine. Internally they may
used in decoction of liquorice or in syrup. The state
of the skin should be attended to. To invite [illegible]
[illegible] surface and to restore the functions of perspira-
tion are prominent indications. The patient [illegible]
[illegible] the skin — [illegible] doses of Opium
and Ipecacuanha may be resorted to with good
effect. To obviate the coldness of the feet, the wear-
ing of [illegible] spinkled with Capsicum and [illegible]
pediluvia, [illegible] commendes. [illegible]
[illegible] one more indication requiring the attention of
the Physician, and [illegible] acidity of
the Stomach. The best [illegible] are the [illegible]
and of these Magnesia is said to be the most effective
as a neutralizing agent, and should always be pre-
ferred when the quantity of acid is large. In cases

not requiring a laxative effect the Sodae Bicarbonas should be preferred on account of its being acceptable to the Stomach. When vomiting is connected with acidity, Aqua Calcis may be used with advantage. In cases of torpor of the Stomach preparations of Ammonia may be used. The Spt. Ammoniae Aromat. is the best though rather feeble, and may be combined with other antacids which it renders less offensive. These antacids should never be used, unless acid really exists in the Stomach, as they have no power to prevent its generation, and their beneficial effects are chiefly confined to the removal of the present evil, and if their employment be persisted in too long, they have a tendency to debilitate the Stomach. If diarrhea exists and a laxative effect is to be avoided Cum pepsi-testa-prep. should be given. Dyspepsia

frequent attacks [illegible] far advanced in life, when the powers of digestion is much impaired and health greatly impaired. In this state it is [illegible] to give food in its most nutritious form and more [illegible] than usual, with [illegible] wine, [illegible] and Capsicum, [illegible] Stimulants in small quantities and [illegible], and [illegible] called for. The treatment of [illegible] occasionally [illegible] administration of [illegible] of Ipecacuanha [illegible] the [illegible] a length of time in the Stomach, and is a cause of irritation [illegible] at this point; and [illegible] that the [illegible] of the [illegible] with [illegible], and [illegible] an occasional accompaniment, Continuous a laxative compound of [illegible]. [illegible] advisable, [illegible].

and some aromatic oil. ([illegible])
[illegible] in which [illegible] most [illegible]
crammies, and under the impression that [illegible]
discharge was [illegible],
the [illegible] quite [illegible]
of the original cause a morbid state of the
mucous follicles of the Stomach, was the most
[illegible] of the [illegible]
from which they constituted the matter dis-
charged from the Stomach. Creosote has been found
useful alone or in combination with Soap, rhubarb
and [illegible] tincture. (Pereira [illegible])
[illegible] is recommended [illegible] in doses of
ten grains [illegible]. [illegible] of this
[illegible], [illegible] the
being in much smaller doses. [illegible] as
an article of [illegible] and [illegible]

[illegible] of Subdivision [illegible] still
preferable to the [illegible], it has been used
in these cases with benefit in doses of from 1/8th to
1/2th of grain two or three times a day. The success
attending the use of [illegible] of bismuth
in Gastrodynia, prompted to trials of this medicine,
in Pyrexia, and with results just encouraging.
Dr Bardsley of Manchester [illegible] it to exert
a local influence and specific action upon the
organs of digestion, restoring the Stomach to a
state of vigor and consequent healing secretion,
essential to the removal of the symptoms of pain
acidity and spasms. Acetate Plumbi, [illegible]
[illegible] are also recommended on some occa-
sions. Baillie who was sceptical of [illegible]
[illegible] of any medicine in this disease, tells us
the [illegible] of compound [illegible] of benzoin rendered

[illegible] mucilage, [illegible] the most efficacious. Reference being had to the Salivary origin of Pyrosis remedies calculated to give tone to the glands, will be called for. With this view various astringent gargles have been recommended or used with advantage. Oxyd rosae cum myrrhae et catechu answers the indication very well. If we look for a radical change in the Secretory apparatus of the Stomach, we must proceed it by means of a regulated diet, and attention to the functions of the skin, with this view, acescent vegetables, common fruits much or imperfectly prepared farinaceous matter, fermented drinks, tea, coffee, condiments and smoked meats or fish are to be abstained from, and in their stead should be eaten a small portion of stale bread, with plainly dressed food or mist, sago, and arrow root,

To meet the latter indication, warm clothing, active exercise in the dry air, friction and the Salt bath, are to be enjoined on the patient for his adoption. Sometimes Carbo Ligni will be found to be of great avail, either alone, or with Soda, frequently the Physician will called upon to treat Cardialgia or Heartburn alone. Simple nervous Cardialgia with pain some acid eructation and vomiting, without increased heat of Skin or activity of pulse will require opiates and other narcotics or preferably, quinia, ferrum, and bitter tonics, in alternation with Carb ammoniae, and other antacids. Ipecacuanha combined with an Aperient or with an Alkali, with frequently answers a good purpose. Both of these indications may be fulfilled by its union with rhubarb and Soap, as in the following. ℞ Pulv. Ipecac. gr xii. Pulv. Rhei. Sapon aa ʒ ss.

M. ft mass in pil. XVIII dividend. S. one morning, noon-night. For heartburn with eructations, gum-ponder has been recommended by Mr. Dick in very decided terms. The gum-ponder should be of fine quality — should be taken dry or in some glutinous which, as molasses, jelly, or a solution of gum. The cases are often very troublesome and [illegible] the patience of Practitioners, from the great predominance of Hypochondriacism. Exceedingly [illegible] from the very nature of the disease the Dyspeptic is eternally complaining of the most preposterous feelings, and is apt after a time to exhaust our benevolence and sympathy. But this is wrong. Whatever may be the extravagance of his conceits, they arise from the intimate dependence of our moral nature on our physical constitution, and being the result of diseased action, become the

legitimate objects of medical men. [illegible] the physician, and we will take [illegible] encouraging the patient with the expectation of cure: and never on this or any other occasion, should the patient be consigned to the terrors of despair. Sunt verba et voces quibus hunc lenire dolorem possis et magnam morbi deponere partem.

The power of words, and soothing sounds appease The raging pain and lessen the disease.

From what has been said, it is evident that life, health, and comfort are dependant upon the organs of digestion. [illegible] is the main one [illegible] through the career of life, with a system unable to [illegible] the ravages of disease. The treatment of diseases such as Dyspepsia, is, most [illegible] rational, rather than empirical, it must also be hygienic as well as therapeutical, and often [illegible]

then of the former than the latter. He who cases his treatment on the belief that Dyspepsia is uniformly the effect of ~~gastritis~~ Chronic Gastritis, is not more in error than he who contends, that the Stomach is such cases is never inflamed, and that its derangements of function depends on debility and imperfect or irregular secretions of gastric juice. The duty of every Physician who feels his responsibility as he ought, is to ascertain by a careful investigation of all the Symptoms, whether the Stomach of a dyspeptic patient is in a chronic state of inflammation or whether the disease depends on transmitted irritation, from other sources, but yet without causing any organic lesion. When Chronic gastritis supervenes, upon dyspepsia, then treat for the former affection. But what will all which has been, said accomplish, unless the remote and exciting

having [illegible] the antecedents of the disease, which has been given rise to it and all the circumstances by which it may be supported. Dyspepsia is a complex disease, the single and most annoying feature of which is commonly but not always gastric distress and disturbance. The Stomach is often the centre whence radiates irritation to other organs, whose functions are troubled in a measure; but it is also often that centre to which converge irritations from these same organs. At one time you will see it, by its transmitted irritation, forcing the Spinal marrow and the motor nerves into a state of morbid excitement, or indeed bringing clonic contractions and spasmodic movements of some part of the muscular system; at another time indirectly, as it were from prior excitement, then there is inability, torpor or partial paralysis in [illegible] the

limbs. Again the Stomach is itself the recipient of Spinal irritation and tormented with pain and Spasm, which disappears with the removal of the primary disease. Such is the heated moral atmosphere in which the people of this country live, who can but wonder that digestion, the earliest of all the actions of the body, to be affected by moral causes should be otherwise than strongly predisposed and prepared for derangements. Too frequently medicine is taxed to obviate the disease, while the cause is pertinaciously adhered to. It is in vain we recommend to the dyspeptic patient, remedies which would certainly mitigate his disease, while intense anxiety remains, hurried half masticated meals at irregular hours, or taken intemperately and at the same time contemptuously, discards

the advice of his medical attendant. Contrast the vigor of mind and body during health with the enfeebled energy of the Dyspeptic, and Hypochondriac. The former knows no impediment to the exercise of deep thought and labor, in any sphere the mind may dictate; the whole attention of the latter is absorbed by those functions which are at best only subservient to the manly exercise of mind, and will, the pleasures of life change to daily suffering, and the patient lives in a deplorable condition.

Since Providence has seen fit to abbreviate the days of an honored member of the Faculty. I can but express my regrets for him, who never ceased to discharge the duty enjoined upon him while a preceptor. Marked for his urbanity not the less noted for his classical erudition, than for his medical skill. The Sun himself may grow dim, with years, but the name and noble acts of our deceased Professor can and never shall be erased from the Medical tablet. He will be missed both as an eminent Physician and highly esteemed Citizen. Although his body now lies beneath the cold and silent sod and his voice shall be no longer heard in the halls of Science - we have the assurance that he lived in hope and died in peace.

Life is ever ending, ever beginning always changing, yet immutably the same.

An
Inaugural Dissertation
On the
Chemical and Microscopical
Examination of "Urine,"

By
Geo. W. H. Nelson
Of Maryland

1864

An Inaugural Dissertation On the Chemical and Microscopical Examination of "Urine."

Submitted to the Examination of the Provost, Regents and Faculty of Physic, of the University of Maryland, for the degree of Doctor in Medicine.

By
Geo. W. H. Nelson
of Maryland
1864

The following
"Thesis"
I respectfully dedicate,
To
Nathan R. Smith, M. D.
Professor
In the chair of Surgery,
Maryland University,
In admiration of his clear and
liberal teachings in operative Surgery,
unraveling much that former teachers
made unnecessarily complex, thereby
inspiring the Student with that
resolution so necessary to the Suc=
cessful prosecution of this important
branch of Medical Science.

Geo. W. C. Nelson, Balto. Maryland.

On the Chemical and Microscopical Examination of "Urine"

It was my original intention to include in this "Thesis" a full consideration of all the Secretions and Excretions of the human body; but want of time compels me to limit myself to the Examination of the most important of them – the Urine.

I shall, however, observe that the chief Excretions consists of the watery vapor and carbonic acid exhaled by the lungs; the Sweat, Excreted by the Skin, consisting, chiefly of watery vapor, lactic acid, a small quantity of carbonic acid, a little oily matter, and a small quantity of the same animal and Saline matters as are con = tained in the blood; the Excretions from

the bowels, including the bile: and, Lastly, the most complex of all the Excretions — the urine.

The retention of any of these Excretions in the body is most injurious, and often fatal, since the peculiar matters characterizing them are not formed from the blood, but actually seperated from it at the parts where they appear; allow, therefore, these Excrementitious matters to accumulate in the circulating fluid, and general constitutional disturbance must result. This is well seen when the principles of the bile remain unseperated from the circulating fluid, owing to defective secretion on the part of the liver, and jaundice results; or, to take another Example, when,

owing to severe renal disease, the urea, instead of being removed by the kidneys from the blood, accumulates in it, and actually produces death by poisoning.

Healthy urine is a limpid, pale, amber-colord fluid, free from any deposit, of an acid reaction to test-paper, unaffected by heat, nitric acid, acetic acid, Liquor Potassæ, Ammonia &c.; and having an average Specific gravity according to Dalton of 1024. While warm, it has a peculiar odor, which disappears more or less completely on cooling, and returns again on being gently warmed. The normal quantity passed by a healthy adult in twenty-four hours varies from ℥xxx in Summer, to ℥xl in winter. The less

the quantity the higher is the Specific gravity, as a general thing, and vice versa.

There is also, in health, a diurnal variation of the urine, both as regards its Specific gravity, and its degree of acidity. The urine is usually discharged from the bladder five or six times a day, and at each of these periods shows more or less variation in its physical characters. It is found that the urine which collects in the bladder during the night, and is first discharged in the morning, is usually dense, high coloured, of a strongly acid reaction, and a high Specific gravity. That passed during the forenoon is pale, and of a low Specific gravity, sometimes not more

than 1018 or even 1015; It is at the same time neutral or slightly alkaline in reaction, Towards the middle of the day its density and acidity with depth of color begin to return, All these properties become more strongly marked during the afternoon and evening, and towards night the urine is again deeply colored and strongly acid, and has a specific gravity of 1028 or 1030,

The Solid contents of the urine may be said to consist of urea, uric acid, hippuric acid, Vesical mucus and epithelium, ammoniacal salts, fixed alkaline salts, Earthy salts, and animal extractive. On making a clinical

Examination of Urine, we should first ascertain the quantity passed in twenty-four hours; its acidity or alkalinity by the use of litmus and turmeric papers: its specific gravity by means of the urinometer, and its behavior on the application of heat, Nitric acid, and Liquor Potassae. To examine it microscopically, a portion should be placed in a conical glass, and allowed to stand for some hours; a few drops of the deposit at the bottom of the glass are then to be placed, by means of a pipette, on a glass slide and covered with thin glass or mica, Crystals of uric acid, deposits of the urate of Soda, and deposits of phosphates, will be

readily distinguished with a good half-inch acromatic object-glass; oxalate of lime, carbonate of lime, cystine, blood-corpuncles, casts of tubes, pus, mucus, Epithelium, and certain fungi, as torula, &c., will require a quarter-inch object-glass: while Spermatozoa and vibri-ones can only be distinctly examined with the one-eighth of an inch glass.

An increased flow of urine, or diuresis, may be temporary, and merely dependent on the large quantities of fluid taken; or it may be permanent for a time and associated with disease, as it very constantly is in diabetes, and in those states of the System connected with a peculiar State of

nervous irritability — as hysteria &c.,.

A deficiency of urine may also be the temporary result of abstinence from fluids, unusual cutaneous activity &c.; as it may be permanently associated with certain constitutional and local affections, as with inflammatory States of the System generally.

In many diseases — as gout, rheumatic fever and Exanthemata — we find the urine usually acid, which may be owing to an excess of acid, or it may be caused by the presence of Oxalic Acid. On the other hand, this Secretion may be alkaline, though it is very doubtful if the urine is Ever so Secreted. It generally happens thus:-

a patient is unable completely to
Empty his bladder, and therefore
after each attempt to do so, a Small
quantity of mine is left which Soon
becomes alkaline: this Sufficies to
contaminate the acid urine as it
drops guttalim from the ureters, Of
course, as a rule, the vital Endowments
of the bladder are Sufficient to preserve
its contents from undergoing that change
which readily takes place out of the
body, viz., decomposition. But this
preservative power depends upon the
integrity of the Spinal nerves and
branches from the organic System
Supplying this viscus; if, therefore, any
injury be inflicted upon these nerves,

directly or indirectly, the result will be diminution of vital power, and the urine will undergo certain changes, as it would out of the body. One of these changes is the Union of Urea with the Elements of water, and the formation of Carbonate of Ammonia, Ammoniacal urine inflames the mucous coat of the bladder, and gives rise to the Secretion of Mucous of a viscid character: the mucous becomes puriform when the alkaline urine has kept up the inflamation for a long time.

Urine depositing uric acid — is very acid, of a reddish-brown color, generally of a Specific gravity above 1020; and on cooling deposits crystals

of uric acid, resembling crystalline sand of a yellowish color. This deposit does not dissolve upon the application of heat: but if as often happens - the urine contains an excess of urates, this excess will be dissolved, and hence the crystals of uric acid will become more distinct, Nitric acid dissolves the deposit, while Hydro-chloric and acetic acid have no action; heated with Liquor Potassae, the urine acid crystals are dissolved, and the formation of urate of Potassa is the result, which is readily soluble in alkaline fluid, Examined Microscopically, large rhomboidal crystals are seen; occasionally lozene-shaped

and square crystals are seen.

Urine containing an excess of urea — may be known by its high Specific gravity 1020 to 1030 — and by crystals of nitrate of urea forming on adding nitric acid to a portion of the urine in a test-tube. If the urea be only slightly in excess, the urine should be concentrated, by evaporation to about one third its bulk, before adding the acid.

Urine containing an excess of urate (or Lithate) of lime, soda, &c, will be distinguished by its high color, increased density, and turbid appearance when cold — somewhat resembling pea-soup. On applying heat with the spirit

lamp, it immediately becomes bright and clear. Examined by the microscope, an abundant amorphus deposit is seen,

These deposits were formally regarded as consisting of lithate of ammonia, It has, however, been lately shown that they have a variable composition, being made up of urates of lime, potash, soda, with only a small quantity of ammonia, Even this last is probably derived from the decomposition of urea,

Urine containing an excess of ammoniacal and fixed alkaline salts is generally of a pale color, and rather low specific gravity, On the application

of heat, a deposit, resembling albumen, is produced, from which it is distinguished, however, by its being dissolved on the addition of a few drops of Nitric Acid. Sometimes, when the quantity of the albumen is small, the cloudiness produced by heat will be dissolved by a drop or two of nitric acid, but will reappear again on continuing to add more of this agent: but the phosphatic remains permanently dissolved, Liquor Potass and ammonia, also produce deposits of phosphates, Examined with the microscope, crystals presenting the form of triangular prisms, Sometimes truncated, at others having terminal facets, are distinguished: occa=

sionally they are of a star-like or foliaceous appearance.

Urine containing Purpurine,— Purpurine never occurs as a deposit unless the urates are in excess, when it gives them a beautiful tint, varying from a pale flesh color to a deep carmine, The presence of an excess of purpurine appears to depend on some imperfection in the secretion of carbon by the organs destined to Eliminate this Element from the blood, as the liver and lungs,-

Cystine,— This substance never occurs in healthy urine, and rarely in disease; it has been found particularly in the renal secretion of scrofulous

patients, It forms a fawn-colored deposit, somewhat resembling mates, but which is unchanged by heat, and slowly dissolves on the addition of Nitric or Hydro-chloric acid; it is readily soluble in liquor Ammonia, A greasy looking pellicle, consisting of crystals of cystine and Ammonio phosphate of Magnesia, sometimes forms on cystic urine,

When a few drops of Ammoniacal Solution of cystine are allowed to Evaporate Spontaneously on a piece of glass, crystals in the form of Six-sided laminae will be seen by the Microscope; they are probably short hexagonal prisms,

Oxalate of Lime,- Oxalate of lime is often present in the urine, and is a

constituent of one of the most annoying forms of calculi, The urine is generally of a fine dark amber hue, of a Specific gravity varying from 1015 to 1035, natural in quantity, and free from any precipitate – unless there be also an excess of urates, Examined by the microscope, crystals, in the form of transparent octohedra with sharply-defined edges and angles will be detected; if the light be bright, these crystals generally resemble cubes marked with a cross, Very rarely the crystals are shaped like dumb-bells, or like two kidneys with their concavities opposed. Dr Golding Bird considers these crystals to consist of Oxalurate

of lime, a salt different from oxalate of lime in ultimate constitution only in the presence of urea and the absence of the constituents of water

Gravel in the urine, – When a patient discharges a gritty powder, or Sand, or Small calculi, with the urine, he is commonly said to have "a fit of the gravel," The most common forms of gravel, are the urates of lime, potash, and Soda, with a Small quantity of ammonia, Next in frequency, is the lithic or uric acid, or red Sand; then a deposit consisting mostly of the triple phosphate of ammonia and magnesia, mixed with amorphous phosphate of lime; next, a deposit of

oxalate of lime: and lastly, one of cystic oxyde, Urinary calculi are composed, either of urate of lime and potash &c. or of uric acid; cystic oxide; carbonate of lime; oxalate of lime; triple phosphate of ammonia and magnesia; phosphate of lime; or of Silica.

Mode of testing for albumen in the Urine. Two tests must be employed — heat and Nitric acid, On applying heat — the most delicate of the two tests — to albuminous urine in a clean test-tube, the albumen coagulates and produces a cloud, varying in density, This only happens, however, when the urine is acid; alkaline

urine may be loaded with albumen, yet heat will produce no deposit, In such a case the urine must be rendered acid by the addition of a drop or two of acetic or Nitric acid, and heat then applied, So, also, urine containing an excess of Earthy phosphates, as mentioned in the preceding paragraph, will become cloudy on the application of heat; for this reason we employ nitric acid which dissolves the phosphates, but renders the albuminous deposit permanent, Nitric acid alone will deposit the albumen, but must not be trusted to, Since it often produces a whitish amorphous deposit of uric acid, when the urine contains a large quantity

of the urates; this precipitate, which might be mistaken for albumen, is distinguished by its not being produced by heat.

When, therefore, we obtain a deposit by both heat and nitric acid we may be sure that it consists of albumen.

When urine contains pus, it is rendered viscid, and thick, like the white of an Egg, by the addition of Liquor Potassae. The microscope reveals numerous glandular corpuscles, about $\frac{1}{100}$ of an inch in diameter, with Smooth margins and granular Surface, floating in the liquor puris; each corpuscle generally contains one or more round or oval nuclei. On adding Strong

acetic acid, the cell-wall is dissolved and the nuclei liberated.

Urine containing Sugar, - Diabetic Sugar differs from cane-Sugar; it has the same chemical composition as that contained in most kind of fruit, commonly known as grape-Sugar, or glucose

Diabetes is not considered a dis= ease of the kidneys, in-asmuch, that Sugar is likewise found in the blood and feeces, It has been determined by Examination that the liver is the Sugar producing organ in the Sys= tem, and that in health it is destro= yed in the lungs,

In disease the lungs are not able

to use up all the Sugar sent to them from the liver; accumulation takes place in the System, and the Kidneys, take on a new action, and Endeavor to rid the blood of the Sugar, which in a normal State of health would have been destroyed in the lungs—

Diabetic urine is of a Sweetish taste and odor, is generally of a pale color, passed in large quantity, and is of a high Specific gravity— 1025 to 1050: the more the disorder the higher the Specific gravity will be.

Several tests have been proposed for the detection of Sugar in the urine.

Moore's test.— To the Suspected urine, in a clean test-tube, add about half its quantity of Liquor Potassae, and boil the mixture gently for a few minutes. If Sugar be present the liquid will assume a dark brown tint. If on the contrary the urine be healthy, it will only be slightly darkened. Care must be taken that the Liquor Potassae contains no lead as it often will if kept in a white glass bottle. In such a case one might be led to a wrong diagnosis.

Trommer's Test.— Place a little of the Suspected urine in a test-tube, and add a drop or two of

the Solution of Sulphate of copper, so as to give to the Mixture a bluish tint. To this add Liquor Potassae, Equal to about half the urine Employed; this will throw down a pale blue precipitate of the Hydrated oxide of copper, which, if there be any Sugar, will immediately redissolve, forming a purplish-blue Solution. By cautiously warming it over a Spirit lamp, without boiling, if Sugar be present, a yellowish brown precipitate of Sub-oxide of copper will be produced, If no Sugar a black precipitate.

Fermentation test,—Mix a little

yeast with suspected urine and fill a test-tube with the mixture, Put some of the urine also into a saucer, and then invert the test-tube and stand it upright in this vessel. Set aside in a warm place for twenty-four hours, If sugar be present, the vinous fermentation takes place in the tube, and the urine in the top of it is displaced by the carbonic acid generated in the process, If the urine is free from sugar, no change will take place.

Bile in urine,— Is detected by what is known as "Pettenkoffer's test," To a specimen in a test-tube, add

a little cane sugar, and then Sulphuric acid, drop by drop, until a bright red, lake, or purple color is produced,

If no bile is present we get no change. Iodine is detected by adding to the suspected urine, first, Starch, and then a few drops of Nitric Acid, when blue Iodide of Starch will be formed, On examining the urine microscopically in acute and chronic desquamative nephritis, in fatty degeneration of the Kidneys, &c, numerous fibrous casts of the Uriniferous tubes are seen, occasionally, containing large quantities of oil-globules, So, numerous blood-corpuscles and

Epithelial scales are found in the same diseases, which latter, in fatty degeneration of the Kidney, are often loaded with oil-globules, In most of these cases the urine will be albuminous,

Kiestein is a principle said to exist in the urine of pregnant women, but owing to my, already, extended thesis, I shall say nothing more in regard to it,

1864

Thesis on Yellow Fever

This is exclusively a disease belonging to hot climates and low situations, bordering upon water courses, It is never found to exist in mountainous districts, but is confined to low, marshy tracts, and to moist situations parched and dried up more or less by continued heat, In this country its ravages are confined principally to the deltas and mouths of rivers in the Southern States, In hot latitudes it is generally found epidemic after a season of great heat and drought, It is supposed — by those most conversant with its character, and habits — to arise from effluvia thrown off, by the decomposition of vegetable and other matters, The

disease commonly declares itself by the
presence of pain in the limbs, back,
and head, chilliness, followed by
flashes of heat; nausea, vomiting;
soon the pain in the head increas
ces, there is also much pain over
the eyes, the pain through the back,
and in the extremities are also agg
=ravated, accompanied by cramps,
The conjunctiva becomes congested
and reddened, the pulse is quick,
and sometimes resisting, Respiration
is laborious, and there is general
and intense suffering, The pati
=ent also suffers from excessive thi
=rst; with a dry tongue, red at the
tips and extending, more or less

to the sides, Sometimes the access
sion is quick and sudden, the dis
ease doing its work speedily and
ending in Convulsions, The contents
of the stomach is thrown up in
an undigested state, and the fec
al matter voided, is of a dark
or black hue, Frequently there is
pain in the chest, in the stomach,
liver, Kidneys and other situations,
These symptoms will be more or
less altered, and modified in di
fferent seasons, or even, in differ
ent cases, Some of them, attained,
being more or less wanting, Sometimes
the force of the circulation will
be sufficient to admit of Venese

-ction, at other seasons of the epidem-
-ic the depression will be found
extreme, and here of course - blood
-letting would be inadmissible,
As the disease advances there may
be, more or less local congestion,
of the liver, brain, stomach, lungs
and intestines, this is to be combatt
-ed in the usual way, The patients
thirst becomes extreme, he seems
to be parched, yet the irritable
condition of the stomach will
scarcely permit him to relieve it,
The pulse, at length, becomes fee
-ble, yet increased in frequency,
the skin is hot and dry and the
conjunctiva turns yellow, the

skin, somewhat later, also, partakes of this yellow hue, The stools are fluid, dark, and offensive, hiccups comes on, the countenance is anxious, lips livid, the teeth are covered with dark sordes, the tongue is dry, and coated, and there is much fetor, sometimes the patient feels easier, and thinks himself convalescent, but is speedily undeceived by the approach of death, Again dissolution is preceded by copious sweats, the patient soon sinking, In other cases the sweats may be the forerunner of resolution and returning health, The matter vomited,

is ab first dark and flocculent mixed with a slimy looking substance, this black vomit, eventually becomes thin and dark colored, like decomposed blood, — which in fact it is — and it is pumped up sometimes in large quantities, being ejected with much force, There is — owing I presume to the low degree of vitality — a tendency to hemorrhage, If blood letting has been resorted to, the orifices reopen, and discharge thin watery looking blood, Hemorrhage may also take place from the nose, mouth or intestines, We may also have dark

-ed to contend with; and in this case it is generally found to refuse all control, soon ending the scene; In the late stage the Saliva beco-mes changed in consistence, and is thrown out - as it were in pellets, the vision is also affected, the pati-ent becomes near sighted, - perha-ps from the declining powers of life - for this symptom, is most generally fatal, Convulsions may terminate life; or dissolution may approach under the guise of deli-rium, — — — — —

The Anatomical changes usually found after death; are, congestion of the membranes of the brain; also

bloody points are to be seen upon the substance of the brain, The vessels are much congested with black blood, The lungs show the same condition of things, and are more or less variegated by an intermixture of black spots, The liver is found, externally, somewhat pale; sometimes interspersed with dark patches, internally, it is charged with the same black, grumous fluid, The stomach contains also some of this dark decomposed blood, it is lessened in its calibre, the external coats being puckered, and its mucous coat is intermixed with dark and red patches,

its vessels are also filled with dark fluid blood, The pancreas and other abdominal viscera and vessels all bear the same characteristic appearance, ——— ——— ———

The Symptoms which seem to be most constantly are, redness of the eyes, Cramps, pain in the back and limbs, nausea and vomiting, The blood is thin and watery, containing but little of its normal saline constituents, and when drawn in the later stage of the disease — which should never be done — it is fluid, dark, and decomposed, ——— ———

Treatment — This although different

=ly conducted in different localities
and by different practitioners – Sec
=ms to be best when most simple,
In a rational point of view the ind
=ications would here seem to be, to
allay excitement, to arrest or combat
the morbid poison, to relieve as far
as possible congestion and to correct
the thin, altered condition of the
blood, If it be found necessary
the patient should be bled as soon
as reaction comes on, after the seiz
=ure, after which XX grs of Hydrarg,
chlo, Mitis should be administered,
this should be followed in a short
time by a teaspoonful of Ol Ricini,
in this way the bowels are speedily

emptied and relieved, and the morbid deposit in the system is counteracted, the bleeding answering to the first indication when it is requisite, If the Mercury and Oil should fail to clean out the canal, it should be assisted by enema, one of turpentine would perhaps answer well, In case of much irritability of the stomach continuing after the blood letting and Calomel, the Ol Ricini may be given in a little Brandy or some such warm vehicle, if the stomach refused to tolerate the first dose it must be at once repeated, and the stomach assisted to retain it by the application of Sinapisms, this will frey

=nently allay the irritation and effects
its retention, for it is important that the
bowels be early evacuated, Blood
letting should not be rashly empl
=oyed, after one efficient impression
is made upon the pulse it will
be seldom necessary to renew it,
for there is apt to be excessive reach
=ion or none at all — when employ
=ed inordinately — and the patients si
=nks, Should the action of the arte
=ries be very strong after the bowels
have been emptied, a second bleed
=ing may be cautiously ventured
upon in the first 24 hours, later
than this it is seldom admissable,
and patients bled after the third

day scarcely recover, To relieve cong=estion locally; Cups applied to the parts will be useful and in this way you can always abstract more blood and with greater safety than by general bleeding, To correct the condition of the blood; acidulated sugared water will be found as useful as anything, and the patie=nt should be nourished with arrow root, After the first day a mixture may be given composed of ℞ - Pulv Camphora - grss. - Potassa Nitras, grsiij - every two or three hours, Ice may be given to allay thirst when desired, and if there be much vomiting an effervesc

=ent draughts of Bicarb. Soda and Tartaric Acid, in tablespoonful doses, or the Sulphate of Morphia may be given, where there are much head symptoms, ice should be applied if grateful to the patient, or Cups to the nape of the neck, followed by a blister, When the general excitement is allayed, if there be still much irritability of the Stomach, with pain in the epi=gastric region, a blister may be applied there also, but the must= =and poultice will perhaps be su=fficient. The limbs should also be rubbed with some stimulati=ng mixture, On the appearance

of the black vomits Oleum Terebinthæ in doses of, XX to XXX gtts will be use=ful, given every hour or two, it will sometimes arrest the vomiting, but when the matter ejected is a mass of decomposed blood unmixed with flocculi, as in its first appearance, there is little or no hope of recov=ery, When yellow bile begins to appear in the stools, it may be presumed the disease has run its course, and the patient being we=ak and much debilitated should be sustained with nourishing and sustaining drinks, The bowels sho=uld be opened in the first stage of the disease at least twice a day,

care being taken to avoid setting up diarrhoea, should this result from over action it will carry off the patient, Anything like ptya=lism is unnecessary and is to be avoided in the low state of the sy=stem in this disease, Some practi=tioners recommend the use of Qu=ind but it is probable that quite as much or more benefit will be derived from the use of Liquors, as Sangaree or Toddy or Wine whey, a course of this kind, in the treatm=ent of this great Scourge to the hum=an race, it seems to my mind would be judicious and quite as successful as any that Could be instituted,

17th
Jan

In review it will be found that it consists in blood letting, early and cautiously pursued, Calomel in one large dose, assisted by Ol. Ricini so as to hurry it thro' the alimentary canal, and thus unload and relieve it of morbid influences, congestion to be reduced by cups, enemas to keep the bowels gently active, friction and stimulating applications to the extremities &c, in the early stage, and later when requisite blisters, acidulated drinks, and the Nitrous powder combined with Camphor during fever, with the use of the Terebinthia in the stage of the vomit. As the source from whence the black vomit emanates is one of controversy, nothing can positively be stated, but

it appears to me reasonable to suppose it to be altered and decomposed blood, and this inference is the more reasonable from the fact of the excessive irritability of the sto=mach, the patient rejecting every drop of fluid taken into the stomach, when towards the close of the scene there is suddenly thrown up large quantities of dark fluid matter, bearing a great res=emblance to the thin dark blood with which the vessels are found congested after death, It is then reasonable to suppose that the vessels of the stomach have lost all contractile power and vita=lity and that this thin, grumous, decom=posed blood with which they are conge=sted is suddenly poured through them

or the openings in the capillaries, which—
though they cannot be demonstrated are
supposed to exist; and to be kept closed
normally by a contractile force inherent
in their coats— into the stomach, and
thence ejected, The action of the pois
-onous effluvia upon the system in the
production of this disease may be attri
-buted to its influence upon the blood,
This vital fluid in the healthy state
is governed by and derives its vitality
from nervous force, If this be not the
case, what may be the use of all those
plexus and nervous filliaments which
ramify upon and follow the course of
the vessels? The red corpuscles are sus
-pended in the Serum, and enjoy a

motion of their own apart from the cur-
-rents of the blood, and this motion is do-
-ubtless derived from and sustained by
nervous influence, The repulsive pow-
-er existing in them, and which keeps
them apart in their course is undoubt-
-edly communicated by this influence,
Again to what can be attributed the in-
-fluence that governs their movements?
that checks or retards their pro-gress in
the neighbourhood of one kind of tissue,
and increases it in the vicinage of anoth-
-er,- thus keeping up as it were a kind
of freemasonry - if it be not due to nervous
force? that force being called into play
in behalf of the wants of the system: that
each particular tissue may be enable to

exhaust those constituents necessary for its growth or repair? again how speedily is this influence broken up when blood is drawn, resulting coag=ulum! In all febrile and malignant diseas=es there is change in the blood; the watery parts are increased and fibrin diminished, in some instances being scarcely capable of resolving into Crassementium, the saline cons=tituents also seem to be absent; It is also well known that the blood will become sensibly altered even to the induction of disease under certain regimen, or in the absence of nutritious food and a healthy atmosphere, The wants of a normal functi=onal activity will cause an alteration in the character of the blood, when the lungs fail to perform their accustomed

office how quickly is the blood contaminated and the circulation laboring! so again in the depurating office of the Kidneys, when any lesion occurs here the blood detects it and like the vigilant sentinal upon an outpost gives instant warning in the production of grave results, Why then should not the action of poisonous effluvia be equally deleterious? it is freely inhaled and brought into contact with the blood in the lungs and has every opportunity for exercising injurious changes or tendency to change which may perhaps be completed by other chemical action, and in so doing acts upon and implicates the nervous organism, or the nerves may suffer a double contamination, through

the blood and by the action of the poison itself, thus a disturbance in the function of the important organs must follow, their sec=retions vitiated and their functions chang=ed or restricted bring about the train of circumstances we have exemplified in Yellow fever; These alterations may be of any grade, from mere depression, followed by reaction and resolution, to fatal poiso=ning producing death, in these cases it cou=ld not well be otherwise, the blood being so much vitiated the organs can no longer derive from it their accustomed stimulus and material, the result then is evidently a want of functional activity and conges=tion with other concomitant circumstances attendant upon this frightful disease,

yellow fever having its habitat in low, flat situations, is not apt to make its appearance in localities of any considerable altitude, this may be attributed to a greater purity of atmosphere, more perfect ventilation, and a less degree of heat; It usually extends from the equator to latitude 25° South, It is mostly confined to the West Indies, portions of South America, the Gulf and Atlantic Coasts as far as Charleston, it has however sometimes visited the more northern cities. Strangers unaccustomed to tropical latitudes are prone to be affected by its ravages; though, after becoming acclimated they seem in a measure to loose this predisposition, persons of a sanguine, robust, and plethoric habit

and high livers are peculiarly predispo
=sed to it, as a general rule one attack
seems to give immunity from a future att
=ack, but there are exceptions to this rule,
in some seasons none being spared, the
disease attacking all without discrimi
=nation, Fever is supposed to act power
=fully as a predisposing cause, also men
=tal emotion or whatever may be likely
to debilitate or depress, — — — —
"By some practitioners, the appearance of
the black vomit previous to the icteroid
hue of the skin — is looked upon as a
favorable sign, attributing it to an effort
of nature to relieve the system of those
effete nitrogenous matters which should
have been eliminated by the Kidneys,

Chas E Roberts

An

Inaugural Dissertation

On

The Science of Medicine,

Respectfully

Submitted to the Examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

By

Jas. S. Fulks

of Maryland.

Baltimore, Feby 10th 1864.

For the Degree of M.D.

A Dissertation on the Origin of the diseases and injuries of Man, The progress of Medical Science and its final triumphs, with an epitome of The Anatomy of the human frame.

"Mans first disobedience, and the fruit
Of that forbidden tree, whose mortal taste
Brought death into the World, and all our woe,
With loss of Eden, till one greater Man
Restore us, and regain the blissful seat"

In entering the great arcana of the Nature of Mans diseases, we think it important to inquire into their origin; and this naturally leads us to inquire into the origin of Man himself;

to: first let us inquire, into what
condition, physically, do we find
him at the present day. This we can
readily answer from experience and
observation. We find in the various
races of Man, and in individuals
of the same race, various moral,
physiological and pathological
conditions. From the most elegant
cultivated intellect, and highest
standard of Christian holiness,
down to the poor idiot, or fellow,
whose parallel is scarcely that of brute
creation, or whose ignominious death
upon the scaffold, pays the
forfeit of his crime. And from
the most healthy, and athletic

to the poorest invalid whose wasted form is but the habitat of disease and death. Thus have we exemplified mans physical conditions, as found to exist, in his pilgrimage from the cradle to the tomb. Out of his origin, and why he is thus the embodiment of disease, and the subject of death, we have but One Oracle worthy of our consultation; and this is the Divine Inspiration, as revealed to us in the Book of Genesis. There we learn that God created man in his own image. Designed for perpetual happiness, without allay. That he placed him in

a delightful Garden, filled with all manner of delicious fruits fit for him to eat, and decorated it with beautiful flowers, pleasant for him to look upon.

There he was permitted to roam amid flowers of (myrtle,) and Groves of Citron and olive. There no heat of Summer's Sun could bronze his brow. Nor chilling Winter shake his frame. Sickness, pain, disease and death were there unknown. All this was but the gift of God to man; and for which he demanded of him, implicit obedience, with the promise of perpetual life and happiness; but, above him suspended the superincumbent malediction,

that, in the day of man's disobedience, he should surely die. How could he sustained his relationship with God, and his inviolability with regard to this high and holy mandate, is amply revealed in the sequel. For too soon we find him dispossessed of his blissful Inheritance,— Wandered from the Paradisical Garden— seeking a home and resting place, wherever it may be found, in the wide domain of Earth. And hence is man become the author of his own death and the originator of all the vast train of diseases to which flesh is heir.

"Unto Woman God said, I will greatly multiply thy sorrows and thy conceptions. In sorrow shalt thou bring forth children. And unto Adam He said, because thou hast eaten of the Tree of which I commanded thee, saying, Thou shalt not eat of it: Cursed is the ground for thy sake; In sorrow shalt thou eat of it all the days of thy life." It was this retribution of Divine Justice, that doomed man to an existence, which, though brief, is every hour is fraught with dangers of disease and death. But the Omniscient God, in thus consigning man

to merited death, ever ready to show mercy to his erring creature; not only shielded him from immediate death, and penal fire, by the interposition of his only and lovely son; but left him in possession of a mind which, though finite, is susceptible of an almost infinite expansion by aid of means at his command. And notwithstanding the multiform maladies that manifest themselves, or hover unperceived amid the abodes of man, God has abundantly supplied the means, both prophylactic and antidotal, for each, in

one or all of its forms and varieties. These means have been largely furnished in the various minerals of the earth, as, also, from the vegetable and animal kingdoms. And, although, many dark centuries had glided into the past before any considerable number, of these vast resourses of human benefit, ~~to man~~ were discovered and made subservient;— Yet at the present day, happy for us, we have witnessed, through the abundant experience of scientific men who have lived and adorned the Medical Profession; some of whom

have passed away from earth,
and others still live to labour and
to bless mankind. It is through
the accumulated evidence, both
of the dead and living, that we
have knowledge of the prophylac-
tic and curative properties of
the various crudes drawn from the
three great Kingdoms - as embraced
in Materia Medica. You are
not confined alone to evidence,
either written or oral, of the bene-
fits derived from the Science of
Medicine. We have had ocular
demonstrations, of the value of
various remedial agencies employed,
in the treatment of diseases -

and injuries, in the wards of the Baltimore Infirmary.

We have seen a great number and variety of Surgical diseases, successfully healed by the Skillful Surgeon of this Institution.

We have, also, witnessed no inconsiderable number and variety of Pathological conditions, as, Abdominal Dropsy, Bronchial and Pulmonary affections, also, various idiopathic fevers, invariably relieved, or caused to banish, almost as before the magician's wand, under a well directed course of Medical treatment, in the hands of an able and skilful

Professor of the Principles and Practice of Medicine, in the same Institution.

These favourable results could not, possibly, have transpired without the aid of Medicines or other remedial means.

Another, and one of the most powerful evidences of the beneficial influence of this great healing art on diseased humanity is, the high esteem, in which it is regarded by the civilized portion of mankind: And notwithstanding, the Homoeopathist, and other impostors, with their mummeries may, at times, misguide

and Cozen the ignorant and, unsuspecting.—

"By their fruits ye shall know them" was the language of our Saviour, to his disciples, more than eighteen hundred years ago, in which they were to designate the faithful and true, from those vile impostors of whom he declared them not to be of Heaven, but of Hell.

This Prophecy would seem to be so applicable to the present War-we mean, with Propriety, be permitted to employ it to define the parallel existing, between true medical Jurisprudence, and

true quackery. We would not be misunderstood, in that our own profession has not suffered from impositions, practiced by its own members; as every banking Institution is subject to suffer from defaulters, and, as every pure Coin is subject to Counterfeit, so, also, have we had, and may still be subject to suffer from the like Counterfeits.—

Dating back, even unto or beyond the period, when old Noah drank of the juice, from the fruit of the vine and was drunk, down to the present time, has this great Healing Art suffered ~~had~~

its compositions and its oppositions;
but we confidently look to, and
anticipate the time, not far
distant, when She shall stand,
forever emancipated and
disenthralled, as the Tree of
Life, whose leaves shall be
for the healing of the Nations.
Although in the course of
nature, Man must die, and disease
them are, which are of such a char-
acter as that they are incurable
by any art of Man. Yet as
he is stated, God has endowed
him with a genius, and provided
the means, wherewith to nourish
that genius, as found in the

provisions of Nature; and by which man as it were, lifts him-self from the Vortex of Misery, in to which he has been pre-cipitated by his own disobe-dience: Or in other words, he has, to a considerable extent, the gift of self preservation.

And in answering this great end from very remote antiq-uity, each succeeding era has had its Professors of Medicine; men various, but generally renowned for skill in the treatment of diseases. Many of their remedies, though administered, or performed, with great faith, and profound veneration,

are, at a later day, regarded as perfectly ludicrous. Such, for instance, as charms and incantations: And the application of remedies to the weapon, that inflicted the wound.

Such, we believe, constituted some of the means in the hands of the ancients for the treatment of diseases. And we think even the principal remedies employed at one day by the magi. and at another by the Druid Priest.

That many were cured in this way, we have no reason to doubt. Knowing, as we do, the potency of faith, in the relief of certain

diseased condition of the nervous system. But that the Ancient employed other remedies, than those above mentioned, both Mineral and Vegitable, is evident from well authenticated history; as well, as that the names of a few, of our Remedies, at this day, testify, to their origin.

But we pass rapidly over succeeding ages, to the onward progress of increasing light, to a period when Medicine began to assume the form of a Science, under the teachings of Hippocrates. It soon became apparent, that as a means to the successful

diagnosis & prognosis of disease;
and the application of appropri
-ate remedies for each, that it
was necessary, that the Anatomy
of the human form, must be
investigated and defined.
And accordingly, ere long, this
had been sucessfully accom
-plished: and the Physiologist
was, not wanting, to define, with
an almost, exact precision,
the peculiar function, appertain
-ing to each organ, in the great
human economy.
The structure of the human being,
was found to consist of Bones,
Ligament, Muscles, Viscera vessels,
&

Nerves and Special Senses.
These are all numbered and classified; and their various Physiological functions determined.
The Bones are divided into the long, thick and flat; and, into those of the head and trunk; and (those of) the upper and lower extremities.
The Composition of Bones (found) to consist, Chemically, of earth and Animal matter, in combination, in the proportion of two of the earth, and one of the Animal.
The formation of Bone is effected through nuclei; or

from one or more points of
ossification. These continue
to widen and elongate, until
their epiphyses approximate,
and unite to form the entire
Bone. These are united to
their fellows by intervarticular
cartilage, and ligaments; and
closely enveloped in Periosteum.
Those joints which admit of motion,
and called diarthroses, are supplied,
to a greater or less extent, with
Synovial Fluid for the lubricating
and facilitating of their motions.
These movements are produced
through the agency of Muscles,
and whose names are significant

of the functions they perform.
They consist of a substance
commonly called flesh, which
has a peculiar, contractile,
power producing motion.
Muscles, whose motions are af-
fected by the will, are called
voluntary; and those not subject
to the will are called involuntary.
The voluntary muscles are the
most numerous, and are com-
posed of bundles of fibres, call-
ed fasciculi, which are included
within tubular sheaths of
elastic membrane; between
which nerves and blood vessels
enter and pass. The former

as messengers of sensation and motion. The latter to give nourishment to, and support the life of the parts. The involuntary muscles embrace, chiefly, the Intestines, Womb, Heart, Pharynx, Larynx, Trachea &c.

The Intestines are divided into the large and small: and are said to be about six or seven times the length of the person. The small Intestine is four fifths in length, of the whole canal, (from the Pylorus to the large Intestine:) and occupies the region of the umbilicus. It is divided

into; Duodenum, Jejunum and Ileum. It has four Coats, Peritoneal, Muscular, Cellular and Mucous. The internal surface of the latter is covered with villi.

The Glands of the Small Intestine, are the follicles of Leiberkuhn, the Glands of Peyer the solitary Glands and Brunner's Glands

The large Intestine extends from the Ileum to the anus; and is one fifth, in length, of the Intestinal Canal. It is divided into Cæcum, Colon and Rectum.

The Cæcum is a cul de sac, and

is the Commencement of the large Intestine. It occupies the right iliac fossa. Its length is, from one and a half to, three inches— its diameter is the greatest portion of the Alimentary Canal, except the Stomach. It has, attached to its lower extremity, the appendix vermiformis: It varies in length from two to six inches. It also contains the Ileo Cæcal valves; an opening, on one side of the Cæcum, through which the Small intestine pours its contents into the large.

The Colon is the largest portion of the large intestine. It gradually diminishes until it terminates,

in the Sigmoid Flexure, on the left side. It ascends upon the right, forming an arch, transverse, and descends upon the left. The right side receives its arteries from the Superior Mesenteric And the left side from the inferior Mesenteric. The nerves are derived from the Superior, and inferior mesenteric Plexuses of the Sympathetic.

The Rectum, the terminating portion of the large intestine, extends from the Sigmoid Flexure to the Anus. Its position is in front of the sacrum and behind the bladder. Its arteries are the Superior, Middle and inferior

hæmorrhoidal. The nerves are from the sacral and hypogastric plexuses of the Sympathetic.

The liver is the largest glandular organ in the human body, and secretes bile. It occupies the right and centre of the Epigastric and left Hypochondriac regions. It is divided into two lobes; the right of which is the largest. A deep depression in the under side of the right lobe contains the gall bladder. The vessels comprise four sets, - The Hepatic artery, a branch of the Celiac axis, which divides into two or three large branches before entering it; Also Portal vein, Hepatic duct, and Hepatic veins.

The Pancreas is a large, flat gland, situated, transversely, behind the Stomach; and is about Seven inches in lenght, and discharges itself, into the duodenum, through the ductus Communis Choledochus. The Arteries are branches of the Splenic.

The Spleen lies in the left hypochondriac region, opposite the ninth, tenth and eleventh ribs: and contains numerous lymphatics. It derives its blood from the Splenic artery.

The Kidneys are two hard glands for the Secretion of urine. They are situated in the lumbar region, on either side, from the first to the third lumbar Vertebra. The right is lower than the left.

There have, each, an excretory duct. For
Conveying the Urine to the Bladder.
Each one is Crowned with a body termed
the Suprarenal Capsule. They are supplied
with blood by the Capsular artery.
a branch of the renal.

The bladder, a necessary adjunct,
performs the part of a reservoir in receiv
-ing and retaining the Urine until
it is Eliminated from the System.
It is fibro-muscular, situated in the
pelvic Cavity, behind the Symphysis Pubis,
in Front of the rectum. An ordinary bladder
is said to contain about one Pint.

The Penis consists of the corpus Caver
-nosum and Corpus Spongiosum, em-
bracing the urethra and enveloped in Skin

and fascia. It performs the double office of conveying the urine from the bladder, and the semen from the male to the female. The base of the urethra perforates the upper part of the prostate gland, and is termed the prostatic portion. The penis is supplied with blood from the internal pudic arteries and pudendal nerves. The vesiculæ seminales, two tubes, placed at the posterior and inferior portion of the bladder, about five inches in length, converge downward and forward, and is joined by the vas deferens, on either side, to the prostate gland, forming the ductus ejaculatorius, which passing through the prostate opens into the urethra.

The Scrotum, Consisting of Skin, dartoid Muscle and tunica vaginalis, is a bag containing the testicles. These latter organs secrete the semen, the vitalizing Property of the Generative Portion of Man.

They hang, Pendulous, within the Scrotum, by the Spermatic cords. The Spermatic cords consist, each, of an artery, vein and nerve; together with the duct. vas deferens.

We pass over other very important organs and tissues for which we cannot afford the time and Space; if we had the talent.

The Skin, Fascia, various secreting and excreting Glands, and ducts,—

all, demand much time and patience. But as I did not promise, in the outset, a full description of the Anatomy; I the more readily, pass over many that I think important that every Doctor of Medicine should understand.

The lungs, the great Motor Power of the mighty machinery, the Physical frame, by which all the Vital Properties of man are preserved and regulated. These extend from the clavicle to the diaphragm on either side.

It is in this important organ that the carbonised blood, by endosmos, becomes oxygenated,

revitalized and sent back to the heart for redistribution. The right lung, shorter and larger than the left, has three lobes; the left but two. Each enclosed in a serious membrane called the Pleura. The heart, also, with its Pericardium, is not less important,— its intricate and complicated machinery for the maintainance and perpetuity of the vital current. It is situated between the Pleura, and rests upon the cordiform tendon of the diaphragm, in the cavity of the thorax. It contains four cavities for the purpose of receiving the blood and throwing it into the lungs:

and receiving it again after it has been aerated and distributing it throughout the body.

Those that receive the blood are called auricles, and those that distribute it, are called ventricles. The right auricle and ventricle, receive and propel the venous blood into the lungs. The auricle and ventricle of the left side, receive and propel the arterial blood throughout the body. The ascending and descending Vena Cava, Empty the venous blood into the right auricle. From thence it passes into the right ventricle, through an

opening, protected by a valve opening downward, from the right ventricle, through the Pulmonary artery, which divides into two branches, into the lungs.
After having been purified, by the respiratory process, it is conveyed from the lung, by four pulmonary veins, into the left auricle, which also, has an opening into the left ventricle, protected by a valve.
From the left ventricle, it passes into the great aorta, which, arising from the left ventricle, opposite the articulation of the fourth costal cartilage, with the Sternum.
It first ascends to the right

then curves back and to the left, and descends, on the left side of the vertebral column, to the fourth lumbar vertebra.

The Coronary arteries, are the first given off, to supply the heart.

The next is the innominata, ascending from the arch, and dividing into the right Carotid, and right Subclavian. The next given off from the arch, are the left Carotid, and Subclavian. The Carotids and Subclavians, dividing and subdividing, supply the head and neck, and upper extremities. That portion of the aorta passing through the thorax is called the Thoracic aorta.

and gives off in its descent, the bronchial, œsophageal and intercostal. The parts supplied by each, is sufficiently signified by the name it bears. The portion that passes through the abdomen, is denominated the abdominal aorta, and gives off the lumbar, phrenic, celiac axis, (with its three branches) the Gastric, Hepatic, Splenic, Superior Mesenteric, Capsular, Renal, Spermatic, inferior Mesenteric, lumbar and middle sacral. At the fourth or fifth lumbar vertebra, the aorta bifurcates into the right and left iliacs. These descend, obliquely outward, to the sacro iliac articulations, and divide into the

internal and external iliacs.
The femoral artery, which is
but a continuation of the external
iliac, commences at Poupart's liga-
ment, and passes spirally down
the inner side of the thigh, until
it becomes the popliteal; and then
dividing again, into anterior and
posterior tibial, supply blood to the
muscles of the leg and foot.
The veins return the blood to
the heart. They are more numerous
than the arteries, and differ from
them, in that, they have valves
that open toward the heart.
The deep veins accompany the
arteries, excepting those of the

largest size. There are two veins for each artery; and, they are called vena comites.

Thus we have cursorily named some of the component parts, and omitted a multitude, that enter into the wonderful structure of Man. And, it would seem, that of all these, there is not one that can be regarded as unimportant or unnecessary. And yet we have a vast many more to record, whose functions are tantamount, if not paramount in importance, to that of any one or more in the human Anatomy. For, what would all avail without

the brain; the seat of ~~seat of~~ human thought - the taberna-cle of the soul - the immortal part of man, That which has, in a measure, constituted him the architect, by divine endow-ment, of his own physical existence. The brain, spinal marrow and nerves, are comprised within the nervous system. The brain is found within the walls of the Cranium; and surrounded by its membranes. The duramater, arachnoid and piamater. The brain consists of four principal parts - viz: The medulla oblongata. pons variolii,

Cerebrum and Cerebellum.

The Medulla Oblongata is the upper portion of the Spinal cord, which seems to be a continuation of the brain, from its base down the centre of the vertebral canal, to the base of the Sacrum.

The brain and Spinal marrow, are the nine nervous centres.— From them the nerves take their origin, and are distributed to every part of the Body. The Cranial nerves, nine in number, originate from the brain, And are divided into nerves of Special Sense, nerves of motion and Compound nerves. The Spinal nerves, Thirty in number,

Each arises by two roots. The
anterior is considered the
motor, and the posterior
the sensitive root. They have
been divided into Cervical, of which
there are eight. Dorsal twelve. Lumbar
five and Sacral five. Sensory nerves
convey sensation to their centres, and
are thence called afferent. They also
convey sensation from their centres
and are called Efferent.
Motor nerves give to the voluntary mus-
cles their Contractile power, by which
man performs through the will,
the varied movements of the body,
and thus answers the end of
his Creation. Through the

agency of the nervous system, chiefly, originate the mysterious and complicated functions comprised in the five senses; viz, seeing, hearing, tasting, smelling and ~~of~~ feeling.

To the anatomist, a knowledge of the structure, location and functions, of the various organs and tissues, is not only essential to his success in the application of surgery, in treating injuries and diseases, but it must surely, beget in him, a spontaneous glow of admiration, and adoration of the wisdom and greatness of so beneficent a Creator.

If fracture or dislocation

occur in any of the bones or joints; he is enabled, by his knowledge of the parts, to diagnose its character and successfully apply the remedies. If there be abscess, or necrosis of the bone, or if there be periostitis, he is enabled, thereby, to look through the mind's eye, into the concealed parts, and to counteract the mischief by the application of the knife or cautery. If there is hernia, hydrocele, stone in the bladder or aneurism of an artery; the Surgeon's knife anticipates the dangerous localities and cuts directly down upon the seat of injury,

without hurt to the important
vessels or viscera, and applies
the remedy.-

Is there stricture of mechani-
cal obstruction, in any of the canals
leading to, or from the system;
his anatomical knowledge enables
him to apply the mechanical or other
remedial means for its relief.- Or if
fever and inflammation, idiopathic
or sympatomatic, be lighted up, he
diagnoses the character, cause and
extent, as well of the disease itself,
as of the structure and texture
of the parts inflamed; and thus
may arrest its progress by making
use of the proper remedies.

should the mucous organs of the throat suffer inflammation or injury; he ascertains their character and extent, by the aid of auscultation. If a patient is attacked with Typhoid fever, he apprehends that inflammation and ulceration may be established in the intestines, and that there may be thickening & softening of the glands of Peyer, the mesenteric ganglia; and sometimes, the solitary mucous follicles of the ileum, are implicated. Ulceration of the pharynx and epiglottic cartilages; softening of the spleen, liver and kidneys. Vascularization of the lungs; softening

of the Head, inflammation of the Meninges of the Brain, are not unfrequent. Knowing, as he must, that these lesions have supervened, as discovered on dissection of the dead subject; his efforts are directed to their prevention or Counteraction. — He avoids the administration of drastic Cathartics, and other remedies that may augment a tendency to such lesions. This will suffice as one small example, to which we might add if we had the time to spare. But we have, all the while, been striving to be brief; — and with as few remarks as practicable, we shall close our very imperfect Essay.

The Chemist, Botanist and Pharmaceutist, all come in, as fellow laborers, to assist in the great and good work, of relieving the miseries of suffering humanity. For Example, one class of medicines, have been found to arrest morbid discharges and prevent relaxation of tissue; such are called astringents. Another class are called tonics because found to increase the tone of the muscular fibre, and the vigor of the constitution when weakened by disease.
A great number of other classes, whose nomenclature is so befitting them, as to specify their peculiar applicability, that they scarcely

need a word of Comment.—
Such as arterial Stimulants, &c—
Arterial and nervous Sedatives;
Alteratives, Emetics, Cathartics,
Diuretics, Diaphoretics, Expector—
ants, Emmenagogues, Sialagogues,
Errhines, Demulcents, Dilluents
and Anthelmintics.

The above comprise the
Constitutional remedies, many
of which act remedially when
applied locally, to which are
added a few that are only—
applicable as local remedies.
Thus, again, we see that there is
a remedy, supplied us, for each
disease. Those which were once

considered incurable, have now become curable. And those now considered intractable will, according to the onward progress of science, yield to new remedies in the hands of the skillful Physician. ——

And, in the language of Scripture, we shall have a Sovereign balm for every wound.

And now, in conclusion, we cannot but repeat our admiration of the Supreme wisdom, that has done all things so well. We think that in the Mineral and Vegetable Kingdoms, there are vast fields to explore — fields rich in the gifts

of God to man; and man shall know them; and they shall do him good; and he shall live to grow old; — And so shall light and knowledge be increased in the earth.

Then will the apocalyptic Angel, having the everlasting Gospel to preach to every nation, and people and tongue, Sweep the breath of heaven, And as his silvery pinions of light shave the level horizon; every island + continent shall bow obsequious to his message: Fear God and give glory to him; and worship him that made heaven and earth, and the sea —

and the fountains of waters.

Then shall righteous-ness and peace among the Nations walk, Messiah reign —

And earth keep jubilee a thousand years.

Jas. L. Fulks

Upon Examining our Thesis we find in it a number of Errors, inelegancies and superfluities which we fain would correct; but, having already devoted more time in its composition than we could well afford, we submit it, as it is, to the worthy Faculty, feeling assured that they will receive it with a due degree of allowance, and pardon us for not recopying it.

Very Respectfully.

J. L. F.

A clinical report of cases.
Respectfully submitted to the
examination of the Regent
and
Faculty of Physic
of the
University of Maryland.
For the degree of
Doctor of Medicine
By
James S Thatcher
of
Pennsylvania.

Session
1863&64

On the 5th of June Louis Lupp aged 19 years Entered the Hospt of the Balto City Almshouse. He complained of swelling with some uneasiness about the knee. No recent injury, but stated that he had suffered a fracture of lower third of femur when quite small. Upon examination the lower third of the thigh just above the knee was found considerably hypertrophied, though presenting the appearance of swelling of the soft parts. The tumour was seated on the right thigh, three inches above the internal condyles of femur, extending up the thigh four inches, and to the popliteal space posteriorly, causing semi-

- flexion of leg, knee joint not involved, as there was no uneasiness manifested whatever on flexing the leg. No other alarming symptoms - Appetite good - Sleeps well - and pulse natural, as yet strength remained unimpaired. Regardless of treatment it gradually grew larger and became more painful as it advanced pulse varied from seventy to Eighty Five -

On the 20th of June it was thought expedient to make an incision into it. It had then completely encircled the thigh, about a joint and a half of bloody serum escaped from the wound the arrest of which soon caused as much tension as before.

Notwithstanding there was no discoverable pulsation in the tumour the artery beat above and below naturally. Up to this time he was treated with alterative doses of calomel and anodynes with a local application of Lunar Lot. June 21st no favorable change. Swelling still continued to increase in magnitude, in consequence of intense pain and hospital diet, he became finite Emaciated and feeble. His expression of countenance presented a pallid cadaverous appearance. Treatment changed Put upon Tonics and anodynes with a gentle aperient occasionally. Continued on in this way

for some time, without any marked change, other than gradually wearing away with enlargement of the parts. On 2d of July another incision was made low down on internal side. The character of the discharge was the same as before. The incision was allowed to remain open. The gentle discharge which was kept up some days. The wound closed spontaneously on the 5th day after it was made without any perceivable benefit being derived from it. The same treatment continued with an additional application of Ung Hydrarg. July 8th tumor as large as ever. Vast distention of parts prevented venous circulation

and anasarca of the leg and foot resulted. Tumor now presents an encephaloid appearance and is evidently of a malignant type. Codliver oil and Tr Ferri chlor 40 drops to the ounce the only treatment. Extreme prostration rendered amputation at this time injudicious. Aug 1st tumor measures two feet and a half in circumference. Hard substances are diffused in various parts which break down with a crackling sound upon pressure. Aug 11th the integuments gave away at the place of the first incision. Blood flowed frightfully by means of compress and bandages the hemorrhage was arrested.

He was stimulated with brandy and water but to no purpose He died on the following morning at 10 oclk Post Mortem made The muscular and all the tissues of the leg were in a mangled condition. On either side of the lower third of femur was a large sac, containing at least three pounds of coagulated blood each. The continuity of the bone was completely destroyed and parted asunder by the effusion of blood which had coagulated. The clots of blood when ever found were extravasated with bony Spicula. The bone had apparently been distended to the utmost, then had literally

fallen into a million pieces
. knee still not seriously injured
Inflammation had extended to
and over a portion of both condyles
of femur posteriorly, but did not
involve the joint proper. Scales of
bone were found adherent to the
fascia covering the tumor. After
macerating a few days and being
cleansed of the coagula and lymph
with which they were loaded both
fragments presented a honey-
comb appearance. Diagnosis
after death, none being made previously,
was Hematoid tumor of lower
third of femur involving the
cancellated structure of the
bone——

S. Y. Aged 32. admitted into the Hospital of the Balto City Almo-house on 27th Aug 1863. His tongue was red at the tip and edges. coated in the middle with light yellow fur. Slight tenderness on pressure over the region of the ileo coecal valve, accompanied with gurgling not however well marked. Pulse 92 and of moderate fulness. Bowels moved three times during the night - thin and of dark brown color. Complained of slight headache during the night. To take chlor Potass ℥ij aquae oj 2 tablespoonsful every 2 hours.. Aug 28 Tongue in same condition as yesterday the coating being a little darker and several fissures in the middle. Gurgling

more distinct. Diarrhoea still continues. the stools being of a dark green color, and thin or of a watery consistence. Several rose coloured spots present not however well marked, Pulse 97 and moderately full. Skin cool complains of weakness. The Chlor Potass was ordered to be discontinued and the following mixture substituted ℞ Quinae sulph grxv. ac sulph ar gs aquae ℥ii ms s Teaspoonful every 2 hours — Aug 29th Tongue in the same state except that it is dry in the middle and moist at the tip and edges. Gurgling more prominent in left iliac region Diarrhoea still continues. The stools begining to assume that

peculiar color known as "Pea Soup" and which is thought to be characteristic of the disease. Rose spots still present, but not numerous. Pulse 98 Skin cool. Complains of soreness generally and especially over the region of the coecum if pressure is applied. Is rational and does not complain of headache the Quiniae mx to be continued. Aug 30 tongue in same condition, lips parched, and small accumulation of sordes on the teeth. Pulse 96 and weak Rose spots more numerous than yesterday. Diarrhoea continues. Gurgling not so marked. Still complains of soreness and weakness Fetor of the breath perceptible.

Aug 31st. The patient in about the same condition as on the 30th Pulse 96 no further accumulation of sordes on the teeth, Gurgling not so marked as on the 30th tongue in same condition, Complains of slight headache over the frontal region. Says he slept better last night than for several nights preceding. Ordered milk 3 times daily Quinae mx to be continued Sept 1st Diarrhoea continues to increase in quantity but not in consistence, Pulse 100 and weak Rose spots still perceptible. Still complains of weakness. but does not seem able to give a clear account of his symptoms-

Sept 2d Patient has not slept

well since last report. Pulse 108 weak and Thready. Diarrhoea and rose spots still present. Pain on pressure over the region of coecum Quinae mx to be continued and milk punch ordered. Sep 3d General appearance unfavorable did not sleep well last night. Tenderness over coecal region more marked than on any previous day. Surface of tongue except the tip covered with dark coating. Small quantity of sordes on teeth Pulse 104 and little stronger than yesterday. probably owing to the milk punch. Diarrhoea still continues and contains curdy flakes. Still rational but confused in conversation. Milk

punct and Quinae mx to be continued. Sep 4th Patient in same condition - Sep 5 - Died at 8 ock A.M. Post mortem 3 hours after death - Spleen enlarged and softened. Several well marked ulcerations in lower third of ilium. Glands of Peyer also ulcerated one of the ulcers exhibiting a perforation of the peritoneal coat. The mucous and muscular coats being destroyed previously by the ulcerative process —

George McG. A stout robust man was admitted into the "House" on Sep 8th - Suffering with delirium tremens. His previous history was

he began to drink at the youthful age of twelve, and continued off and on up to the present time this was the ninth attack of delirium tremens that he has had. He would drink very hard for some weeks then stop for a month or so, and begin again, He began on this spree about the 25 of last month, on his arrival here I went into the cell where he was confined, I found him talking rapidly to himself. Face red. pulse rapid and weak. bathed with perspiration — Had not slept for four nights previous to his arrival here — He imagined his cell was filled with snakes &c). I ordered him large doses of whiskey

Syr Zinziber & Tr opii - to be repeated every hour. Saw him about five hours after the commencement of the above treatment, He had not as yet slept. Still harassed by fearful sights - Saw him again the next morning - had not slept during the night, He seemed busy collecting large sums of money from the floor, Pulse somewhat fuller. Substituted Acet Tr opii gtts 30 every hour, did not sleep during the day although he took upwards of 350 drops of the acet Tr opii. At night ordered a large drink of whiskey containing ar Syr opii - Slept about half the night. next morning was somewhat better. Still nervous - To continue

the opium in less quantities during the day - Slept part of the day and all the night - Woke on the 11th Sept and was discharged a well man —

I. S. Aged 60 was admitted into the Surgical Ward of the Balto City Almshouse on — — 1863, with an indolent ulcer on the anterior portion of the left leg about midway between the knee and ankle joint, He was at once allowed full diet, and the following application was ordered for the ulcer ℞ Ung Resinae ℥ii Hydrag ox Rub ℥i ℳ and apply twice daily. This acted very well for a time, promoting

the granulating process, but as it did not fully answer expectations, the following dressing was substituted for it. Red Iod Hydrag was applied to the edges of the ulcer three times during the week and improved its condition, but the ulcer still maintained its indolent character. A new method was then adopted - The exclusion of air from the ulcer. A piece of oiled silk large enough to cover the margins of the ulcer was laid upon it and confined by adhesive strips. Collodion was then applied freely causing it to adhere closely to the skin. Over the silk a roller was applied

and the dressing allowed to remain for seven or eight days, owing to the discharge the air could not be entirely excluded. But upon removing the silk there was a decided improvement in the condition of the ulcer. The dressing was reapplied, being again removed after the lapse of two weeks, the ulcer was found to be still improving, but owing to the discharge it could not be continued with prospect of success. The patient shortly after left the ward at his own request. This is no doubt a good plan of treatment of ulcers attended with but little discharge —

E. Norris aged 30 years, was admitted into the "Lying in Room" of Balto City Almshouse May 16th 1863. She was taken in labor on 15th about 10 oclock A.M. Vertex presentation. Delivered of ordinary foetus. After 20 minutes the pains came on normally, after a continuance of half an hour. failed to expel the secundines, An examination per vag was made, when it was discovered that the circular fibres of the cervix uteri were to a greater degree contracted than those of the body and fundus. it was impossible to pass the finger into the uterine cavity, and the cord when pulled did not give, and from a slight hemorrhage at

was supposed that the placenta
was partially adherent. Placing
the hand over the abdomen during
a pain, the fundus was discovered
to be in a state of complete inertia
The kneading process was tried without
success. Placed ice over the fundus
and gave ℞ Ex Ergot ℥j. The
contraction still remaining
irregular. Awaited for a pain
and passed the hand into the
vagina in the form of a cone.
Following the funis with much
difficulty, gradually insinuated
the four fingers through the os which
was gradually dilated, until
the whole hand was in the
uterine cavity where it
was retained with great

difficulty on account of the violent contractions of the uterus. Gentle traction being made the cord could not succeed in removing the placenta, The pulse was very little depressed although a moment after the patient lost a great amount of blood which caused the os to relax. The attachments were now peeled off gradually. Firm and steady traction being made on the cord in the axis of the trunk, it was removed The uterus contracting naturally on the hand which was expelled without further loss of blood Gave Sol Morph ℥ii. The patient soon fell into a tranquil Sleep

and awakened much refreshed. The convalescence was somewhat protracted. I may add that the child died in about two weeks, the mother being badly syphilized..

Aug 27th J. S. German aged 50, of robust constitution and temperate habits, received eight contused wounds of the scalp averaging each about an inch in length and extending to the bone, also both fore arms broken. Aug 28 the patients head was shaved the blood cleansed away, and interrupted sutures together with a compress to control the

hemorrhage from a small artery
Bandages were applied to retain
the compress. A pasteboard splint
was applied to the right fore-
-arm, and two wooden splints
to the left fore arm, patient
removed to bed. Slept well
and does not seem to suffer
much pain, ordered fluid
diet. Aug 30. Patient slept
well one or two of the wounds
seemed to have healed by first
intention. Owing to the compress
and bandages not being removed
could not observe all of
them. Pulse 106 and good. Aug 31
Patient sleeps well. does not
complain of much pain.
Scraping of wound on scalp

removed. Nearly all the wounds
healed. No suppuration, Patient
does not complain of pain
and may be considered in
a fair way to recover. —

Inaugural Dissertation

on

Dropsy

Respectfully Submitted

to the

Provost Regents & Faculty of Physic,

of the

University of Maryland

Colledge of Medicine,

for the

Degree of Doctor in Medicine

by

Edwin B. S. Shoemaker

Baltimore County

Md.

Feb. 15th 1864.

Dropsy.

Dropsy is not strictly a disease in itself; but a symptom of a diseased condition. It holds its rank, as a disease, among the other maladies, from the occasional inability to diagnose the true pathological condition, or ascertain the primary malady upon which it may depend; and from the urgency of the symptoms to which it gives rise, requiring the interference of measures, to relieve the patient, without reference to the true source of the disease.

Dropsy is a—

collection of serous fluid in the areolar tissue, or in one or more of the serous cavities, or in both the areolar tissue & serous cavities. There is a certain quantity of fluid necessary to the healthy state of these parts, and it is morbid only when the demands of the tissues are exceeded, and the fluid collects to such an extent, as to produce inconvenience or injury, and to which the term dropsy is applied.

Dropsical effusion may take place, wherever there is a shut serous sack, or a loose permeable areolar tissue. When the ventricles of the brain, or the interstices of the

pia-mater, is the seat of watery accumulation, it is termed, hydrocephalus; when in the pleura, it is called, hydrothorax; when in the pericardium, hydropericardium; when in the peritoneum, ascites; when in a small extent of the areolar tissue, it is called, oedema; when in a large extent of the areolar tissue, Anasarca; and when the serous cavities & areolar tissues are both involved, the term general dropsy is applied.

Pathology.

The pathological conditions upon which dropsy depends, vary in different cases, but in the serous or areolar tissues an excited,

there may leave out an undue amount of fluid; this irritation may progress, and inflammation supervene, though this watery accumulation is not called dropsy, when after the cessation of the acute symptoms it is readily absorbed; but when the fluid resulting from acute inflammation still remains, and increases, or becomes complicated with oedema, though there may exist chronic inflammation, it is undoubtedly dropsy. Inflammation may be the cause of this affection, in some rare cases; but the disease more frequently depends upon irritation, with vascular turgescence; for the relief afforded the vessels of the affected part, by effusion,

prevents, in a great measure, the occurrence of inflammation.

Dropsy is not unfrequently associated with a relaxed, and debilitated condition of the tissues; if the blood-vessels be in a relaxed and debilitated condition, it renders them unable to resist the transudation of the serous portion of the circulating fluid, through their coats, dropsy is consequently the result.

Congestion is another frequent condition; venous congestion is caused, either by an obstruction to the free return of blood to the heart, or by distention of the blood-vessels; which may be produced by injecting

water, in large quantities, into the veins of a living animal, or by an abnormal ballance in absorption and secretion. Engorgement of the vascular system, may cause irritation of the capillary vessels, thus favouring the effusion, or it may be associated with a relaxed condition of the system, and the transudation a mechanical action, with no perceptible irritation.

An altered condition of the blood is another pathological condition upon which dropsy may ensue. In anæmic patients who have died of this disease, no examination could reveal any organic lesion, to which the disease could be ascribed. From

various analysis of the blood, it has been found, that it is deficient in one or more of its normal constituents, though, the exact change, which favours a tendency to this disease, has not been ascertained; the blood of these patients, is generally more watery than natural, and this condition alone is sufficient to account for the [illegible].

Deficient absorption frequently results in a watery accumulation. The physiological fact of a constant secretion, and a corresponding degree of absorption, taking place in the areolar and serous tissues, renders a collection of fluid impossible; but, if there be

a derangement of the healthy action of either, or both of these functions, a dropsical effusion may result. If there be a deficiency of absorption, and secretion remain as in health, or an excess of secretion, and absorption continue normal, or a diminution of absorption, and an increase of secretion co-existing, a liquid accumulation would seem inevitable. Dropsy does not always follow deficient absorption, for the thoracic duct itself has been found obstructed without giving rise to this disease; nor has it been conclusively demonstrated, that there is a diminution of absorption in most cases; but on the contrary

the absorbants of the parts, have been found enlarged as if from increased action, and the rapid loss of flesh, which frequently takes place in the course of the disease, plainly illustrates the increased activity of this function; moreover, the effusion of dropsy has not been positively ascertained, to be the same as the healthy secretion; albumin has been found in dropsical fluid, while it is rarely a component part of the healthy secretion.

Another, and probably the most frequent pathological condition found in dropsy, is obstruction, or obliteration of one or more of the large venous trunks. If when there exists

an interruption to the free return of blood to the heart, and a collateral circulation is not carried on sufficiently active; dropsical effusion will almost invariably take place. The nervous system is also concerned in absorption; and when these vessels become engorged from any obstacle which retards, or effectually prevents the circulation through the natural channel, their absorbant power is diminished or wholly suspended; and the thinner portions of the blood exude through the sides of the affected vessels; There may occur a complete barrier to the flow of blood through one of the large venous trunks, and yet no effusion

ansur; this obstruction may depend upon a tumor, which may be gradually developed, and the collateral circulation correspondingly increased, and finally, when the main trunk is no longer capable of fulfilling its office, the collateral circulation is sufficiently well established, to perform the office of the obliterated vessel.

Symptoms, Course Termination &c.

Dropsy is frequently assisted in with all the characteristic phenomena of fever, increased fever and frequency of pulse, furred tongue, loss of appetite, the surface hot and dry, and generally a deficiency of the urinary Srention. When such symptoms occur, it

is termed acute or febrile dropsy; and is occasionally accompanied with pain in the abdomen and thorax, in ascites and hydrothorax, more or less cerebral disturbance in hydrocephalus, and sometimes tenderness of the surface in anasarca; but the local symptoms are more generally characteristic of irritation, than true inflammation. The effusion sometimes comes on gradually, and accumulates slowly, with diminished vascular action; this form is usually accompanied by debility; again, this affection may be ushered in by acute symptoms, and terminate in the chronic form, and vice versa. In dropsy of debility, the

pulse is feeble, the skin is dry and very pale, and it is frequently associated, with an anæmic condition of the patient.

There is, however, one symptom which dropsies of all forms, and from any cause, usually coincide, scanty urine; but, this is occasionally normal in quantity, or even superabundantly secreted. It is with no little difficulty, that the exact quantity of this secretion during the twenty four hours, can be ascertained, as the amount varies in different persons, and in the same person under different circumstances; the average amount secreted in health, is stated to be from two to three pints, in twenty four hours.

The color of the urine is not unfrequently altered, in a greater or less degree, in this disease; it is sometimes dark brown and frothy, resembling beer in appearance, or dark red and latritious, bloody, bilious, pale, light yellow or reddish, turbid, opalescent, limpid and occasionally with healthy in appearance. In febrile dropsies, the urine is usually of a dark brown color, turbid, more or less albuminous, and its specific gravity is usually diminished, in renal dropsies, it is reddish or dark brown tinged with blood, more or less acid in its character, albuminous, and frequently contains flakes of epithelium, thrown off from the tubuli uriniferi of the kidneys,

and often complete fibrinous casts of
the renal tubes, are discoverable by the aid of
the microscope. The dry skin so common
in this disease, is owing to the suspension
of the perspiratory function. Constipation
frequently exists, and often the most
powerful cathartics are inadequate to
relieve the bowels. Diarrhœa, sometimes,
complicates this affection, owing to
intestinal irritation or inflammation;
its occurrence in the advanced stages
of the disease, is considered as an
unfavourable sign, when there is no
reduction of the dropsical swelling,
and when dropsy comes on in the course
of Diarrhœa or dysentery. Thirst is
sometimes a prominent symptom,

occurring in debilitated, as well as in
febrile cases.

The dropsical fluid is
generally limpid, colorless, or slightly
yellowish, without smell, and appears
to consist of the serum of the blood in
an altered condition; in dropsies
caused by obstruction of the veins, it
is sometimes tinged with blood; it is
occasionally white, opaque, resembling
milk, and mingled with flakes of a
coagulable substance; as has been
directed in some rare instances. It is
principally composed of water, and
one or more of the constituents of the
blood. Its specific gravity varys in
different cases, and is always heavier

than water. By ingenuit analysis it is found to contain water, chlorides of sodium and potassium, sulphate of potassa, either free or Carbonate of sodar, and phosphates of lime, iron, and magnesia; besides those mentioned, other substances have been found in some rare instances, such as albumin, fibrin, urea, and a peculiar animal principle, called by Marcet. muco-extractive.

Physical effusion obeys the law of gravitation, and is influenced by the position of the patient; in consequence of which, the feet and ankles are the first observed to swell in anasarca, when the erect position is maintained; the same law governs

the fluid in the serous cavities.

This disease is confined to no period of life; it is frequently observed in old age, or towards the decline of life, and is not uncommon in infancy.

Dropsy occasionally recedes rapidly from one part, and as suddenly a watery accumulation is discovered in another part; this sudden transmission of the effused fluid, is most unfrequently fraught with danger; for as the effusion leaves the areolar tissue of the lower extremities, cerebral or thoracic symptoms may manifest themselves, and give rise to the most fatal results.

The most distressing and

various symptoms, arise in the progress of the malady, and is dependent upon pressure of the fluid, deranging the functions of the different organs. The lungs and the heart, when compressed, give rise to exceedingly distressing symptoms, effusion within the cranium frequently cause the most disastrous results, and gangrene sometimes ensues from pressure of the liquid upon the skin.

Causes.

Dropsy may be caused by anything that will produce one, or more of numerous pathological conditions, upon which the disease depends. Anything that will produce

irritation of the secreting tissues, may cause dropsical effusion; exposure to cold while heated and perspiring, is one of the most common means of inducing this condition, and especially if the kidneys be in a condition, that would render them inadequate to the performance of the increased duty, thus put upon them; but more frequently this exposure will induce inflammation, unless there be a predisposition to the effusion existing in the blood, bloodvessels, or from some other obscure cause. The sudden suppression of habitual discharges, as of the menstrual flow, hemorrhoidal flux, of the urinary secretion, as well as the disappearance of cutaneous eruptions,

or gout and rheumatic irritations &c.
leaves a predisposition to this affection.
The exanthematous fevers not unfrequently
leave a tendency to this disease; as does
other febrile affection, as an old case of
intermittent fever, when it causes venous
congestion from enlargement of the
spleen or liver, and when it leaves the
patient in an anemic condition;
tubercular deposits in the affected
tissues, is sometimes a cause of this
irritation, and one least capable of
being obviated.

Debility and an altered
state of the blood, have often found to
produce this disease; and these two
conditions not unfrequently co-exist;

for the causes that give rise to the altered condition of the blood, often renders the tissues prone to ulceration, thereby favoring the occurrence of the effusion.

The disregard of certain hygienic rules and regimen, are among the most common causes, of an impoverished state of the blood, such as unwholesome or insufficiency of food, the exposure to damp, wet and cold air, the insufficiency of clothing, the habitual use of alcoholic or intoxicating liquors, and the feeble state of the system, when harassed by scrofula, gout, cancer, and scurvy.

The extirpation of the lymphatic glands in the axilla and

groin, has occasioned oedema of the corresponding extremity, though, this does not always follow their removal.

There are certain diseases which leaves a predisposition to the occurance of dropsy; it is frequently noticed following scarlet fever, the intermittent and remittent fevers, and is often dependent upon renal, hepatic and cardiac diseases.

Scarlet fever, is not unfrequently followed by dropsical effusion, and appears in some cases to proceed from the action of the cold upon the delicate skin, after desquamation, imposing its duties upon the kidneys, which become congested and rendered unfit for the performance of this additional

duties require of them. The usual period for the occurrence of this complication, is from ten to twenty days after desquamation; but there is no regular period for the dropsical symptoms to manifest themselves. Anasarca is the most frequent form of the disease; but sometimes the serous cavities become involved. The state of the kidneys is the most remarkable pathological condition found after a fatal termination of this disease; these organs are usually in a state of congestion or inflammation, and is undoubtedly the chief cause of the dropsical effusion; "Bright's disease of the Kidneys," can frequently be traced as an attack of Scarlet fever. The dropsy following this disease, is generally febrile

in its character; the urine presents a high color, albuminous, and often bloody, is almost always scanty, and of low specific gravity, and exhibits an abundance of epithelial cells, and fibrinous casts of the tubuli uriniferi, when examined by the microscope.

The miasmatic fevers, as the intermittent and remittent, are among the most frequent causes of dropsy; the form of the disease following these fevers, is generally anasarca; but when complicated with disease or disorder of the viscera, general dropsy usually occurs. The subsidence of intermittent or remittent fevers, not unfrequently leaves the patient in

an anæmic condition, with the blood in a thin and watery state, which so well favours its transudation. The albumin is frequently drained off by the copious diaphoresis and the urinary secretion, leaving that property deficient in the circulating fluid

In the advanced stages of diarrhœa and dysentery, when chronic ulceration of the bowels has taken place, dropsical effusion is not unfrequently associated. These diseases, sometimes, announces the favourable termination of dropsy; but they more frequently render the disease obstinate of treatment, and occasionally they foreshadow the

approaching death of the patient. An attack of either of these diseases may become chronic, and dropsy result from the impoverished condition of the blood, consequent upon the long continued impairment of the digestive functions; and when the primary disease is entirely removed, the dropsy speedily succumbs to appropriate remedies, or is sometimes absorbed without treatment.

Disease of the liver,

is frequently the cause of this affection. Enlargement of this organ, may obstruct the free passage of blood through the ascending vena cava, and also impede the flow of blood through the portal circulation, causing venous congestion

in all the branches below the obstruction; in this case, anasarca and ascites would result; the portal circulation may recapr, and the pressure of the liver may prevent the flow of blood, through the vena cava only, and anasarca be prevented; or, which is most commonly the case, the portal circulation alone is affected, and ascites the result. There are various diseases of the liver which give rise to this malady, as scirhus, cirrhosis, chronic inflammation &c. These diseases may be suspected by the persistency of the effusion, the yellow hue of the conjunctiva and skin, and the bilious color of the urine; of these causes, chronic inflammation is the most common, not because it is more capable

of inducing the disease, but it is of more frequent occurrence. Dropsical effusion is more tractable when the diseased condition of the liver is chronic inflammation, than when there is some organic derangement of that organ. The urine is generally scanty, high colored, and often bilious; it seldom contains albumen, unless there coexists some renal affection.

Disease of the heart is often followed by dropsy, though it is not a necessary result of affection of this organ. When general dropsy occurs, and it cannot be traced to any other organ, and upon examination the heart be found in a diseased condition, which

has been present for a long time; it is reasonable to infer, that the cardiac affection is, alone the true source of the difficulty. Dropsy originating from this cause, is most frequently general, first appearing as anasarca of the lower extremities, and as the effusion increases, it collects in the serous cavities, and sometimes pervades the areolar tissue of the lungs, giving rise to exceedingly distressing symptoms, which may be relieved, but from which death alone can effectually rescue.

Disease of the kidneys is an exceedingly common cause of this malady, and is very interesting from the fact, that the same diseased condition

of these organs, have been found to exist in different individuals, with widely different results; a patient may have disease of the kidney amounting to complete disorganization of one of these organs and no occurrence of dropsy; while on the other hand, the same amount of lesion to the same organs in another person, may produce extensive effusion, with the most disasterous results.

Dropsy may ensue from any cause that will prevent the kidneys from secreting its due amount of urine; the fluids not carried off by these organs, seeks another outlet, and if this fluid is not eliminated

by one or other of the mucous tracks, or the perspiratory function be inadequate to its removal, or wholly suspended, from cold or other cause, it finds its exit through the areous and areolar tissues. This condition may result from debility, irritation, congestion, inflammation or disorganization of these organs.

Dropsy is not an unfrequent complication, or perhaps it would be proper to say, a symptom of that important and highly interesting disease, known as "Bright's disease". The anatomical characters of this organic affection of the kidneys, are very indefinite and not always constant; the morbid appearances denote a

change in the structure and substance of these organs; the cortical or secreting part being the primary and chief seat of this degeneration, and not unfrequently the medullary or excreting portion is also affected, but in a less degree. This diseased condition of the kidneys, alter materially its normal secretions, both in quantity and quality; the urine is generally scanty, and contains albumin in a greater or less degree, the specific gravity is unnaturally low, which depends upon the diminished quantity of solid constituents proper to healthy urine. The specific gravity of healthy urine according to M. Solon, is from 1.020 to 1.024

As this disease advances, it decreases from the healthy standard, and is sometimes as low as 1.008. Mr. Solon in one instance observed it as low as 1.003;, but states the mean at 1.013. This condition of the specific gravity of the urine, serves as a very important diagnostic sign; due reference should be had to the quantity secreted, for when there is an abundant secretion of urine, without a corresponding amount of solid matter, the watery portion will lessen its specific gravity; but when as it frequently occurs, in certain stages of this disease, the specific gravity decreases, and the quantity of urine diminishes at the same time, the evidence is strong, of some morbid

condition of the kidneys. Another very important sign, is the abnormal presence of albumin in this secretion, but this is only diagnostic of "brights disease", when it is persistent, as sometimes, certain articles of food, or probably it is owing to certain forms of indigestion, that will render the urine albuminous for a time; the constitutional irritation produced by mercury, or a blister to the surface, is said to occasionally cause an albuminous state of the urine. In some cases of this disease, the albumin has been known to entirely disappear for a short time. "Dr. Watson, in his Practice of Physic, mentions it having vanished for several hours, after the

effectual application of a hot air bath;
and after profuse purging by a full
dose of elaterium". But when albumen
is found upon frequently testing the
urine, to be a constant ingredient, and
the amount of albumin large, the
specific gravity low, and the existence
of epithelial cells or casts of the
tubuli uriniferi, it is a circumstance
almost conclusive, of the existence of
"bright's disease of the kidneys".

Dropsy, sometimes,
appears suddenly in the acute forms
of this disease, and in one day, or three
days, effusion anasarca may pervade
the areolar tissues of the body, sometimes
one or more of the serous cavities

occurs involved; ascites is especially
apt to occur, when there exists hepatic
disease; or when complicated with
cardiac affections, the effusion may
be still more extensive, involving
several or all the serous cavities of
the body, and death is invitably
the result. A diminution of the
quantity of albumin in the blood,
the retention of irritating substances,
which were destined to be carried off,
and the watery constituents not
being voided, but retained and
distending the blood vessels, is sufficient
to account for this rapid effusion.

In chronic forms of
"bright's disease", the dropsical effusion

is more gradual in its approach, manifesting itself, first as oedema of the feet and ankles, which continues to progress until finally it invades a large extent of the areolar tissue and even some of the serous cavities.

Renal dropsy is peculiarly liable to give rise to cerebral complications, such as headache, drowsiness, stupor, delirium, paralysis, apoplexy, convulsions and coma; which symptoms depend upon the poisonous effects of the urea, that exists in the blood, these cerebral disturbances, usually occur at the close of the disease, and are among the most frequent modes of its fatal termination.

Hepatic and cardiac diseases frequently accompany, and complicate renal disease, rendering it more dangerous to the patient, and obstinate to remedial measures; though a complete cure, in such cases, is almost hopeless, yet there are few cases that the dropsical symptoms cannot be relieved.

It is important to form a correct diagnosis, between dropsies of renal origin and those depending upon other causes, which may be done, by attention to the circumstances of the case, close scrutiny into the previous history, and the absence of any other

appreciable cause; the diagnosis would be strengthened, if by the occurrence of any accident that would tend to affect the kidneys, such as falls or blows upon the back, or by acute or dull pain in the lumbar region, or any such symptom, which would refer to the kidneys; and if the complaint follow scarlet fever, it may generally be found located in the kidneys as at least one source of the difficulty.

Prognosis.

Dropsies usually yield readily to appropriate treatment, and even spontaneous cures have been observed, and is usually coincident with an increase of one or other of the

secretions from the mucous surfaces.
"Dr. Watson records a case of hydrothorax,
which was greatly relieved by the
expectoration of a limpid fluid," he
relates another remarkable case, of the
cure of hydrocele by profuse vomiting
and purging". But spontaneous cures
are more frequently coincident with
diarrhoea or profuse diuresis.

"Febrile dropsies more
frequently admit of complete cure
than does the chronic forms of the
disease. The prognosis of dropsies are
considered favourable, in proportion
as the cause is more or less capable
of being removed. In chronic inflam-
mation of the liver, the effusion

generally disappears with the removal of the cause; renal dropsy is also curable in the earliest stages of the disease; but when the effused fluid is dependent upon organic disease of one or more of the viscera, it can very rarely be permanently cured; it can be removed, but will, again, return, sometimes it will continue to return as often as it is removed, untill finally it gets the mastery; even then much can be done to relieve the distressing symptoms; but the fast failing strength of the patient gives way, precluding the use of the evacuating remedies, which had been previously successful in removing the liquid;

and, even though the stimulating and supporting treatment be instituted, the patient dies, with the effusion constituting the greatest source of his distress.

Treatment.

No one plan of treatment would be applicable, to a disease with such a diversity of causes; and the remedial measures should be adapted, to the peculiar circumstances of each case. There are, however, certain indications which should be followed in all cases; first, correct as far as practicable, the pathological condition upon which the effusion may immediately

depend; second, remove by absorption or otherwise the effused fluid; third, remedy any disease, either cardiac, hepatic, or renal, which may act as the remote cause of the disease; and fourth, support the strength of the system, when this may be necessary, under the exhausting influence of the disease, or of the remedies employed.

Venesection will sometimes prove beneficial, and materially reduce the dropsical swelling; when clearly indicated this remedy may prove adequate in itself, to the removal of dropsy. Bloodletting is admissable, when

the effusion is dependent upon a highly irritated or congested condion of the affected tissues, with active febrile symptoms, or when there is no febrile excitement, and the pulse is full and strong, and the patient plethoric; it is beneficial in two ways, first, by its tendency to relieve the congestion of the tissues, upon which the effusion depends, second, it decreases the action of the heart, and by diminishing the quantity of circulating fluid, it renders the bloodvessels in a more favourable condition, for the re-absorption, and final elimination of the fluid from the system.

Local bloodletting

the effusion is dependent upon a highly irritated or congested condion of the affected tissues, with active febrile symptoms, or when there is no febrile excitement, and the pulse is full and strong, and the patient plethoric; it is beneficial in two ways, first, by its tendency to relieve the congestion of the tissues, upon which the effusion depends, second, it decreases the action of the heart, and by diminishing the quantity of circulating fluid, it renders the bloodvessels in a more favourable condition, for the re-absorption, and final elimination of the fluid from the system.

Local bloodletting

may be used, when there is decided evidences of congestion, of any internal organ or tissue; Cups are preferable to leaches, as they produce a certain degree of counter irritation, and are more speedy in diverting the current of blood from the affected part.

Dropsy has been caused by the loss of blood; as depletion not only removes the aqueous portion of that fluid, but it impoverishes it by diminishing its fibrin and red corpuscles, thus enfeebling the patient; it should therefore, be used with caution, for excessive bleeding, or an untimely use of the lancet, may lead to the most disastrous consequences.

Local depletion may be used in conjunction with venesection; but it is less dangerous, and more benefit has been derived from its use, when employed in connection with the indirect means of evacuating the accumulated liquid, as diuretics and hydrogogue cathartics.

When the dropsical fluid, depends upon a debilitated and relaxed condition of the system, with an impoverished state of the blood, local & general depletion is inadmissible; for the object to be accomplished, is to restore the tone and vigor of the system generally and improve the quality of the blood; to

fulfill thesr indications, thr preparations of iron and peruvian bark ar among thr most efficacious. It may be desirable to unite some diuretic or altrativr medicine with the tonics employed, as squill, digitalis or mercury. Thr decoction of pipsissewa is highly recommended as a drink or vehicle to other medicines, in certain forms of this disease; thr decoction of cetraria is useful, from its combining demulcent, nutritious, and tonic virtues. In addition to tonics &c. the patient should have a diet of nutritious and digestible food; porter and ale may be given if thr circumstances of the case require its use.

In correcting the condition of the general system, the removal of the effused fluid may at the same time be accomplished; this can generally be done by promoting one or more of the secretions.

Diuretics will usually prove more beneficial in the cure of dropsy, than most of the other evacuating remedies. The urine, which is almost always scanty, would naturally attract attention to the kidneys; and if this organ can be brought fully under the action of diuretics, the watery accumulation almost invariably decreases, if it is not entirly removed.

The bitartrate of potassa is exceedingly valuable as a diuretic, and when the patient's strength is capable of holding out under the use of this remedy, and when there is no organic disease of the viscera or tissues, upon which the dropsy may depend, it will generally yield to this remedy, with or without adjuvants according to the circumstances of the case. Bitartrate of potassa should be given in doses from half to two drachms; and from half to two ounces to be taken in the course of twenty four hours; it should be given in small doses at first, and gradually increased until the desired effect is produced; the purging, if any

should occur, may be checked by a few drops of the tincture of opium; It may be given dissolved in an infusion, of one of the mild stimulating tonics and diuretics, as juniper berries, or a decoction of cetraria &c. when there is any derangement of the digestive function. This salt should not be used, in cases of extreme debility, as its exhausting influence, may prostrate the patient beyond the power of reaction; and when its debilitating effects cannot be overcome, by tonics and stimulants, it should be at once discontinued.

The nitrate of potassa has been found of great service, also the acetate, carbonate and bicarbonate of potassa have been used, and not without

beneficial results.

Squills is an exceedingly useful remedy, and may be given in combination with other medicines; as digitalis and the preparations of iron or mercury, when the action of these remedies are desirable. Squill is stimulating in its action, and is contraindicated in febrile dropsies, or when there is congestion of any of the internal organs or irritability of the stomach; it may be combined with digitalis to obviate the ~~two~~ depressing influence of that drug. Squills may be given in dose of from one to three grains, three or four times daily.

Digitalis is among the

most efficint and valuable remedies of the class of diuretics. "Dr. Blackall says it is almost always a certain remedy in the anasarca following scarlatina, when the urine is albuminous and no irremedial disorganization of the kidneys exist." (Wood.)

Digitalis may be combined with other remedies as squill, acetate & bitartrate of potassa or Mercury. "a formula given and highly recommended by Dr. Baillie, consists of three or four grains of pilula hydrargyri mixed up with one grain of the dried powder of squill and half grain of the dried leaves of digitalis; to be given twice or thrice daily. Dr. Baillie also states, that squill & digitalis are much less effectual by themselves, than

when combined with mercury." (watson).

Digitalis, besides its diuretic properties, exerts a powerful sedative influence over the action of the heart and circulation. When it is administered, the patient should be scrupulously watched, and upon the first appearance of any deleterious effect, the remedy should be discontinued. The accumulative tendency of this drug should be considered, and after several doses have been given and no decided effect be produced, the remedy should be suspended for a time. Digitalis may be given in substance, tincture or infusion; the dose of the substance is half grain increased gradually to one or two

grains, three times daily; if the tincture be used it should be given in small doses gradually increased to half drachm; and if the infusion be used, it would be safer to begin with, drachm doses and gradually increase to half ounce.

Tobacco has been used with benefit; it slowly resembles digitalis in its action, and should be cautiously administered.

Spirits of nitric aether has been employed with good effect; it is especially useful when the disease is associated with nervous derangement; it is inadmissible in febrile dropsies, or when there is congestion of any organ or tissue, incompetence of its stimulating

properties. Buchu is not unfrequently found a useful remedy; it is highly recommended, when the infusion is combined with the bicarbonate of potassa. Oil of terpentine, and cantharides have been recommended in great insensibility or paralysis of the kidneys, with suppression of the urinary secretion. The preparations of colchicum may be used with advantage, when there exists symptoms of gout or rheumatism.

Diuretics frequently disappoint the most sanguine expectations. A combination of two or more of these remedies may prove successful, when after repeated failures, following the administration,

of a number of these agents, when given alone. When tonics are requisite they may be combined with diuretics.

When this class of remedies are contraindicated, by an irritated or congested condition of the kidneys; cathartics constitute one of the best and surest means of evacuating the accumulated fluid. Should there be any irritation of the stomach or intestinal canal, this remedy would be inadmissible, from its tendency to increase the existing disorder and bring on inflammation, causing the most disastrous results; and if gouty symptoms be present, cathartics may invite this disease from a comparatively

secure position, to the intestinal canal or stomach, thereby greatly endangering the life of the patient.

Cathartics act indirectly, by diminishing the quantity of the circulating fluid in the system, thus favouring absorption, and by their own action, diverting the irritation from the seat of the dropsical effusion. They are inadmissible in cases of debility, as their prostrating effect, may exhaust the patient beyond the hope of recovery. In febrile dropsy, or when there is symptoms of congestion of any internal organs; except the alimentary canal and stomach; or when there exists chronic dropsy with torpor of the bowels, full strong pulse

or when the pulse is normal in its character, cathartics may be employed with great benefit, and are not unfrequently adequate to the entire removal of the dropsical liquid. In febrile dropsies, those cathartics which possess the refrigerant properties should be selected; the tartrate and bitartrate of potassa have been highly recommended, the tartrate of potassa and sodae, has been used with beneficial results. If these saline cathartics are insufficient to produce the large watery evacuations desired, they may be advantageously combined with the hydragogue vegetable cathartics; jalap and bitartrate of potassa is highly esteemed

for its efficacy in the treatment of dropsy. Gamboge, elaterium, croton oil, scammony and black hellebore, have all been used with success. These prompt and powerful cathartics, should be judiciously administered, and if they occasion irritability of any part of the alimentary canal, they should be discontinued.

Cathartics should be given as frequently as the circumstances of the case will permit; if the patient has sufficient strength, and of a vigorous constitution, it may be given every day, and if administered less than two or three times a week, no permanent good can be expected.

Diaphoretics may be resorted to when diuretics or cathartics are contraindicated, or have failed to accomplish a cure. This class of remedies though not so competent to produce cures, as diuretics or cathartics, yet they materially diminish the quantity of the dropsical liquid, and occasionally effect its removal. The most efficient of the diaphoretics are ipecac & opium in the form of dovers powder, and the antimonials. Ipecac and opium, act, the former by keeping the pores, the latter by promoting the capilary circulation; when the capillaries and sweat glands, are in a relaxed condition it favours the transudation

of the thinner portions of blood through their coats, and which is rapidly given off by the sweat glands; and as there is an increased amount of blood sent to these vessels, there is consequently a larger amount of fluid eliminated. When there is febrile action the refrigerating diaphoretics and antimonials are more appropriate; tartar emetic is the most important of this class; as it has a tendency to quiet the circulation and lessen the forcible action of the heart.

Diaphoretics may be beneficially aided by external means; as the hot air, vapour, and warm water baths, and by friction to the surface.

Mercury is occasionally
used with much benefit; it should,
however, be used with great caution,
for the peculiar susceptability of
dropsical patients to its influence,
renders its use exceedingly hazardous.
It is inadmissible, in cases of anemia
or great debility. Calomel or blue mass
combined with squill and digitalis, is
very efficacious, and highly recommended
by Dr. Samuel Chew our late Professor of
Principles and Practice of Medicine.

When the effusion
depends upon disease of the heart; the
remedies should not be directed to the
removal of the fluid alone, but in part
to the affected organ, with the view of

restoring its natural function or alleviating the affection, if incurable. The patient should be kept quiet in all cases, where there is disease of the heart; if the disease be chronic inflammation, great relief if not a cure, may follow local bleeding, blisters, and a moderate mercurial impression, sustained for a considerable time. By attention to the symptoms which the case exhibits, remedies may be chosen, that will fulfill more than one indication; thus digitalis is often found suitable, from its double action upon both the heart, and kidneys; it may also be combined, with some of the preparations of mercury, according to circumstances.

In the earliest stages of renal dropsies, when there is active congestion of the kidneys, cupping over these organs may be required and repeated if the circulation will permit; counter irritation by means of tartar emetic, croton oil, or issues, are not unfrequently found serviceable. If upon the failure of cathartics and diaphoretics, to accomplish any good, and the urgency of the symptoms require the removal of the effusion, recourse must be had to diuretics; and such chosen, which would prove less likely to stimulate the kidneys injuriously; of this class digitalis and bitartrate of potassa, are the least stimulating and the most effectual;

they may be given alone or in combination. The condition of the kidneys, the blood, and the system generally should be corrected as far as possible.

When all available means of evacuating the accumulated fluid, have been tried and failed to accomplish any good result, and the urgency of the symptoms demand the removal of the liquid; the operation of tapping, acupuncture, or puncture with the point of a sharp lancet, may be resorted to. After the evacuation of the fluid, it not unfrequently follows, that the remedies, which were inert or failed to accomplish any benefit, produce the desired effect of promoting its

reaccumulation, and occasionally a complete cure is effected; but more frequently it fails to do more than prolong life for a few years; as it only affords temporary relief; the liquid again collects, rendering a frequent recourse to the operation necessary; but sooner or later death ends the sufferings of the patient.

The diet and drink of the patient should be altered to suit the circumstances of the case. The diet should be antiphlogistic in cases attended with febrile action; nutritious, in anemic and debilitated patients; and food easy of digestion, in those complicated with feeble digestion.

Cooling drinks may be allowed, in febrile dyspsia; but the stomach should not be overloaded with fluids; if there be great thirst small quantities of fluid, frequently repeated, would not be so injurious as a large amount, taken at once. In debilitated cases, cold diuretic infusions may be substituted for water as a drink. Old cider is said to be beneficial, and when spirituous liquors are indicated, gin should be preferred, as it has diuretic, in addition to its stimulating properties.

1864

An

Inaugural Dissertation

on

Placenta Praevia

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of the

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for the

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by

Desperd M. Walshe M.D. & L.L.D.

Introduction

Placenta Praevia

When the impregnated Ovum after having made its way down the fallopian tubes, falls into the cavity of the uterus, it is covered by a tufted membrane called the Chorion which thus constitutes the shell of the Fœtal Ball.

This coming in contact with the thickened and congested uterine mucous membrane adhere thereto, and increasing in size, becoming muscular and taking upon itself the office of aeration of the fœtal blood, it receives the name of Placenta.

This organ may be attached [illegible] the [illegible] the

Prospectus

accompanied by danger — how we
are the means by which the passage
may be safely accomplished — two will
suggest themselves — first to hurry the
passing body through as rapidly as
possible so as to curtail the duration
of the dangerous agency — second to
remove the element of danger, or quell
its activity so that the gateway may
be safely opened — This is a very
homely illustration but on that very
account it well suits my purpose
I will now proceed to apply
it to the subject and every one will
agree that the indications are

1

to deliver the child as soon as possible
and thus prevent the necessary
gradual dilatation of the [illegible]

1

2

3

1) [illegible]
2) [illegible]
3) [illegible]
4) [illegible]

Management of a Case

[illegible]

2.

To do either the state of affairs at the Cervix that the gradual dilatation may go on without producing Hemorrhage.

Treatment

On these two principles hang all the methods by which nature rescues the patient from impending death. So also on these two precepts depend all the reliable methods of treatment ever devised.

The speedy delivery which the great vigor of the uterus sometimes accomplishes we effect by version or the forceps. Evacuation of the vessels by direct & reasonable produce by artificial evacuation of the water. And by partial or complete separation of the Placenta we [illegible]

2nd Mrs. Stone.
Maryland

1864

An
Inaugural Dissertation
on
Pleurisy
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for the
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by
Wm. H. Stone
of
Maryland

The subject of the science of medicine is the animal body and particularly the human body; and in studying it we observe its construction and qualities; its actions and its sufferings; its derangements; and its decay. But that which chiefly concerns the practitioner is the theme of health and of disease.

Health we regard as the standard condition of the living body; that is, it implies freedom from pain and sickness; freedom also from all those changes in the structure of the body that endanger life or impede the easy and effective exercise of ~~all those~~ the vital functions. But disease on the other hand consists in some deviation from that state; some uneasy or unnatural sensation of which the patient is aware, some [illegible]

reason to believe that the [illegible]
had a knowledge of several of the
most active remedies - hellebore,
opium, and squil, for example.

Diseases appear to be exceed-
ingly numerous and diversified if
we include all their differences in
kind and in degree and authors
are forced in order to investigate the
laws that govern their phenomena to
break them into groups and dispose
them according to some principle
of order. There are various methods
by which this is done - each au-
thor according to his own views. The
examination of the body is suf-
ficient to show that it is made
up not only of seperate parts but
of seperate systems all of which are
subject to disease in one form or
other. Of these seperate parts or systems
the one which is as liable to disease,
as any other, is the respiratory syst-

which [illegible] and [illegible] attract the greater part of the attention of the practitioner. Now of these disorders of the system of respiration, [illegible] select as the theme of [illegible] that is.

Pleurisy.

The word Pleurites is derived from two greek words [illegible] the pleura and its inflamation; and as its name indicates [illegible] an inflamation of the pleura, or of the lining membrane of the walls of the thorax and of the investing membrane of the lungs. The pleura is one of the serous membranes and is one most subject to inflamatory diseases. Pleurisy is sometimes associated with other diseases as bilious fever or other forms of [illegible] [illegible] fever and in such cases are called [illegible] and typhoid pleurisy; but it is more frequently [illegible]

with pneumonia in which case one ~~[illegible]~~ predominates over the other. But there is less pleurisy with pneumonia than [illegible] with pleurisy. When both are present, and pneumonia predominates it is called pleuro-pneumonia; but when pleurisy forms the main disease [illegible] term pneumo-pleuritis. In such cases the predominating malady attracts the most attention. In some cases the inflamed pleura extends no farther than that which immediately invests the diseased portion of the pulmonary tissue, when no distinct name is given it. When the disease is of short [illegible] is [illegible], when protracted it is chronic. The inflamation may occupy both sides or one; the former of which is very [illegible], except when associated with phthisis. It [illegible] frequently occurs in the right than the left side. Sometimes

it involves the whole membrane and sometimes only a part.

The inflammation is attended with redness, but in the pleura of a dead person, unless he has died of some other disease while he happened to have incipient pleurisy, we very seldom observe the redness alone. There is often an addition of false membrane — a layer or more of plastic lymph. In some cases it can be stripped from the lungs or the ribs rather than in the sound state. The most remarkable effects of pleurisy is the increased secretion which is either coagulable lymph, serous liquid or both mixed is lodged in a shut sac having peculiar anatomical relations. One portion of the membrane lines the walls of the thorax while the other invests the lungs. The opposite surfaces being in opposition but moveable one upon

the other, any different effects may be produced by the inflammation. The pleura of the lungs may adhere to the costal pleura, so as to obviate any movement between them, and to such an extent as to obliterate the entire cavity; or the two surfaces may be forced apart by the effusion of serum between them; or they may be united by the concrete [illegible] some [illegible] and separated by the effused fluid in others. Consequently, great differences will be produced in the complaint and the symptoms as one or the other of these conditions arise.

One consequence of the effusion of coagulable lymph is the formation of false membranes; these are found whether there be much serum or not. They differ in different cases [illegible] their situation, organization, extent, thickness and effects.

At first the coagulable matter is soft and of a greyish white colour. It afterwards becomes thicker and adherent — showing marks of organization. The [illegible] to appear much separated at first; but as the disease advances they multiply and form themselves into red lines which afterwards inosculate with the vessels of the pleura becoming a constituent part of the living body. This organization [illegible] very rapidly. False membranes which had acquired vascularity, have been found in the bodies of those who have died of pleurisy, after very few days sickness; while in other patients who have lived for many months after the commencement of the disease, no trace of vascularity has been found at all. The organization of the [illegible] does not depend [illegible] at a time from

which it has been effused. It has much more to do with the previous condition and habits of the patient. Plastic lymph and early adhesion are to be expected in young and strong and healthy persons, while purely unorganized by a [illegible] granular deposit, with copious and abiding serous effusion tending to become purulent in the old, feeble, cachectic and scrofulous.

The extent of the false membrane corresponds with that of the inflammation. Sometimes it extends over the whole pleura of the same side. Then if there is no effusion of serum; or it is absorbed, the lung becomes everywhere adherent to the wall of the side of the thorax in which it is situated. The adhesion, which at first, is soft and tender, grows firm and assumes the character of areolar tissue when it is of old standing.

The thickness of the false membranes is always very variable. Sometimes it is not more than that of the pleura itself; but in the majority of cases the thickness is much greater. Very often several layers are observed one upon the other, to a considerable depth.

In some instances, after death, a clear, serous, or watery fluid, colourless, or of a pale yellow colour and perfectly limpid and transparent, is found. This may occur independently of inflamation of the pleura; from some obstruction to the circulation. In such case it is a kind of dropsy-hydrothorax; and is a common consequence of disease of the heart. But when this is not the cause, it is always probably the result of inflamation itself. This clear liquid has most always abundant matter floating in it. Very often [illegible]

thin fluid is turbid or whitish; sometimes puriform, sometimes tinged with blood; and sometimes it consists entirely of blood, which has seperated into clot and serum. When there is no wound, or [illegible] of any of the vessels the conclusion is that there has been [illegible]. The effused fluid is almost always without smell, if there has never been any [illegible] between the cavity of the pleura and the air.

Sometimes air or gas is found in the cavity of the inflamed pleura, either alone or with a liquid. This is observed in the hissing sound that is produced when the walls of the thorax is punctured; or by penetrating it [illegible] under the water and noticing the escape of the bubbles of air. The air is admitted, for the most part,

by the cavity communicating somehow with the external air; though it is probable that sometimes it is secreted or exhaled from the diseased membrane; and sometimes the product of decomposition within the chest.

Now the necessary effects of these fluid matters, that very often occupy the cavity of the pleura, when that membrane has inflamed, will vary considerably according to the quantity of fluid that accumulates. It may vary from less than an ounce to several pints. It is lodged at first in the lower part of the pleural cavity and consequently presses the lung aside in order to make room for it. As the liquid increases more of the lung is displaced, together, with other parts: the walls of the chest, on that side,

the heart may be pushed from its natural position under and even to the right of the sternum where it can be heard and felt and seen to beat. It may be pushed out of its proper place to the left by an effusion into the right pleural cavity. The lung is sometimes so much compressed as to be reduced to a thin cake, and occupies a very small place in the upper and posterior part of the thorax near the vertebral column; and if it is covered over as it often is by a strong layer of adventitious membrane; one might come to the conclusion that it had entirely disappeared; by cutting the false membrane, which binds it down, it can always be found; and in many instances it is found. It may be wrinkled on its surface, but by being insufflated, it can be

restored to nearly its former volume. The lung does crepitate between the fingers, in this flattened condition, as it is entirely emptied of air and sinks in water. But its firmness, its strength, and its capability of being inflated prevents it from being confounded with hepatized lung. Its cellular tissue is sometimes obliterated on account of the opposite surfaces of its vesicles and air tubes adhering: the lung will not admit air; it looks like a piece of muscle and is then said to be carnified

These changes are capable of producing on the sounds of the health chest different effects. When the lung ~~lung~~ is compressed and seperated from the wall of the thorax by the fluid effused between the pleurae; it is not so large and less air will enter

it: consequently there will be less intensity of the respiratory murmur and, in consequence of the distance and the effused, ~~and the effused~~ fluid, between the ear and the lung, the murmur will be less audible. The lung is attached to the spinal column, by its roots, A small quantity of liquid will therefore cause it to ascend upwards and inwards; and a certain quantity will raise between the lung and ribs, forcing the pulmonary tissue up around the bronchial tubes. In this case the breathing and the voice would be heard through the partially condensed lung and the layer of liquid. We hear bronchial respiration and bronchial voice & cough; though more or less modified. Now pneumonia which solidifies by the effusion into the texture of the lung, of the liquid caused

by the inflamation, has the same effect, so for as auscultation is concerned as pleurisy, which solidifies a portion of the lung on account of the liquid which is effused around it, compressing the air out of it, and transmitting the sound. Therefore bronchial respiration and bronchophony are not to be noticed on when examining the chest unless the circumstances under which they occur, and with which they are associated are taken into consideration.

Sometimes the effusion is so extensive as to compress all the air out of the lung and to force it up in the thorax, which will be distended; along the vertebral column and to press strongly against the bronchial tubes: in this case no respiratory murmur can be heard at all; nor any coughing, as the

swelled thorax can neither expand nor contract; and, therefore, air can neither make its entrance nor exit; nor will there be any vibration with the voice; consequently bronchophony also ceases, or is but faintly heard.

Again, if percussion be made on a part of the chest, beneath which, there is incompressible serous fluid, instead of healthy lung, a dull flat sound will be produced. But, when percussion is made over a solidified lung, a dull sound is produced also. Hence the dulness of the part percussed does not distinguish pleurisy or pneumonia, or some other disease that has the effect of making the lungs solid, without stopping the larger bronchi. But there is a way by which, this percussion, in some cases, can be

rendered conclusive. The dull sound, caused by the solidification of the lung, occupies always the same spot in every position of the patient: while in pleurisy the dull sound follows the liquid, as it always runs to the lowest part of the cavity, independent of any position the patient may assume. If therefore the chest is found to be when struck, always resonant in the higher and dull in the lower portion, in whatever position it may be; the conclusion is that the cavity of the pleura contains liquid. When the patient sits up, the dull sound will be produced from the lower parts of the chest; from the vertebral column to the sternum, on one side. When he lies on his back the anterior part of the thorax sounds hollow; while the posterior sounds dull; and if he turns over and lies with his face

downwards the sounds will be reversed.

There are two states which may interfere with the true discrimination of the sounds produced by percussion in the manner above described; which are the partial adhesions of the pleurae, and the exceedingly large amount of effusion: In the one the effused liquid is confined, by the ~~effuse~~ adhesion of the two opposite pleurae of a portion of the chest, which prevents it from sinking, as the position of the patient is changed: in the other the effusion is so extensive as to fill the entire cavity and thus fixing the compressed and void lung in one position; for it is necessary in order to obtain the different sounds, caused by the different attitudes of the body, that there should be light-spongy lung to float upon the heavier fluid as it sinks, according

to the ~~gravitation~~ position, of the patient under the influence of gravitation. In the case of excessive effusion the entire surface of the diseased side will render a dull sound. In pneumonia the lung may be so much inflamed as to produce universal dulness on the side affected: and in diagnosing the two conditions the physician is apt to be puzzled.

The general symptoms of pleurisy are chill, pain in the chest, difficulty of breathing, cough, difficulty in moving, and fever. These signs are very much the same in pneumonia and I may add pericarditis which complaints can only be distinguished by the physical signs.

The pain is one of the most striking and characteristic signs of the disease. It lays in one spot, and the patient feels as if some sharp instrument was suddenly

punched in at that point — every time the act of inspiration extends beyond a certain limit.

It has considerable variety in regard to its situation, duration & severity. It is commonly felt on a level with or just beneath the breast, in a part corresponding with the attachments of the diaphragm. The cause of the pain and the reason, it is confined to one small spot has not yet been satisfactorily explained. Some pathologists say, that there is a larger amount of motion of the costal over the pulmonary pleura, at the lower part of the thorax; and that the pain produced by the friction, when the membranes are inflamed, is felt, therefore, where the friction is the greatest. But the pain is not confined always to the same spot. It is sometimes felt in the shoulder,

in the axilla; under the clavicle, along the sternum; and sometimes it is diffused over the whole of one side. It has been observed to prevail along the cartilaginous borders of the false ribs when the surface of the diaphragmatic pleura was inflamed. It often affects the hypochondrium, and even to extend as far as the flank, so that it may be mistaken for a symptom of abdominal inflamation. Sharp pain situated in the right hypochondrium, belongs oftener to the pleura than to the peritoneum. Such is very often supposed to be a sign of hepatitis, when it resulted from inflamation of the pleura.

The pain is generally increased by pressure upon the intercostal spaces, by inspiration, by cough, by percussion, by lying on the affected side, and by the different movements

of the body.

Sometimes the pain is exceedingly sharp, whether it occur at intervals, or whether it be continued: the more limited it is, generally, the more sharp it is. In this state of the pain the patient has great anxiety; he makes short and imperfect inspirations through fear of aggravating it; they dread the effort of coughing, or sneezing, and take to prevent the desire to cough which the disease may occasion. Sometimes it is moderate, is felt only during a deep inspiration and is scarcely increased by pressure or percussion. And Some it is not attended with any pain at all.

The pain generally exists from the commencement of the complaint. It is sometimes fugitive at first, and becomes permanent after

a day or two. In this case it may be mistaken for simple rheumatic; or pleurodyne, or merely a nervous pain. When the pain is augmented by slight pressure upon the ribs; or, extends over a large space; or, is unattended with fever; or, is fugitive - we may suspect that its situation is in the muscular and fibrous tissue; but there is no certainty in this. Adhesions are found to exist between the lung and ribs of persons who have died of phthisis. Such persons have been liable to pains in the chest during life, corresponding to those situations where the adhesions are found, after death, most frequently and in the greatest number. This showed the periods, at which the slighter forms of pleurisy took place.

The inflamation of membranous parts, and especially of serous parts, is attended with more pain

than inflamation of parenchymatous; an example of which is afforded in Pneumonia. Some cases of pneumonia are attended, in the beginning, with stitch in the side, while others are not. In those cases in which the stitch happens, the pleura is also somewhat inflamed, and the pain is caused by the coexistence of pleurisy: this is pleuro-pneumonia. Where there is no pleurisy, the stitch is wanting.

The respiration in pleurisy is considerably embarrassed especially at its commencement, and while there is still some pain. The inspiration, in particular, is short, hurried and often interrupted. This evidently depends upon the pain, which prevents the free contraction of the muscles that expands the thorax. The expansion is often less on the affected side than on the other.

Effusion when it supervenes,

will be likely to aggravate the dyspnoea in a greater or less degree according to circumstances. If the lung, on the side, different from that on which the pleurisy lays, is diseased, then the compression of that, which is on the side of the pleurisy, will have a more deleterious effect upon the breathing; which will be in proportion, first, to the amount of the effusion; and secondly, to the rapidity with which it has taken place. When the effusion has been slow - or when it has long existed and the case has become chronic - the circulation through the lung has had time to adapt itself to the condition of the parts, and the equilibrium between the quantity of air and blood in the lung, is restored, and the embarrassment of the breathing is consequently slight.

But there are singular

exceptions sometimes found, to this. Cases have been seen, in which there was pleuritic effusion enough; not only to fill but to dilate that side of the chest in which it existed, who appear to be quite free from dyspnoea; and that, not while they are at rest, for they talk, walk about, and even take long journeys, without complaining of any shortness of breath. Now in old and chronic cases this is reasonable enough; but Cases have been met with, where this absence of dyspnoea is not restricted to those cases, in which the collection of liquid has taken place slowly; but, even to those in which abundant effusion has taken place in a few days. In this respect, therefore, there are great varieties. Sometimes the difficulty of breathing never ceases to be urgent from the first to the

last; and these are apt to be fatal cases. In others the respiration is much embarrassed at first, but gradually diminishes, and perhaps ceases, long before the fluid is reabsorbed. And in others again, the respiration is very easy, both at the commencement and during the progress of the disease.

Another of the symptoms of pleurisy, ~~of~~ is cough. In some few cases this symptom is entirely absent, even if the inflamation is intense and there is much effusion into the pleura. When it does exist it is small, half suppressed, ineffectual and dry; or there is expectoration of slight catarrh. It does not occur in paroxysms. If it is accompanied with the expectoration of much frothy ~~matter~~ mucous, the pleurisy is complicated with bronchitis; if rust coloured sputa be

expectorated it is complicated with pneumonia

"The position, which a patient assumes, who is labouring under pleurisy, is generally on the side contrary to that which is affected, or on his back, on account of the pain, which a position on the diseased side, would cause. Sometimes he is obliged to sit-up. When the disease is more advanced, that the pain has ceased and considerable effusion has taken place, he cannot lie on the sound side, on account of the dyspnoea, occasioned by the non-expansion of the chest on that side; and what is more, the effusion, settling down upon the mediastenum, would press upon the sound lung. But the pain does not prevent him from laying on the diseased side, any longer, ~~which~~ which he consequently does in many instances;

but more commonly the patient lies neither upon his back nor his side, but between the two. Again some few persons lie in any position - on the back, or on either side - without any increase of the dyspnoea, though the side is full of liquid.

Of the symtoms which we have been considering, not one of them, taken seperately, can be considered as pathognomonic of pleurisy. Yet when all of them occur together they afford almost a certainty. But there are yet other and more conclusive signs, which in themselves, or conjoined with those already mentioned, render the diagnosis easy and certain. These signs are the size forms and motions of the thorax on the affected side; and above all, percussion and auscultation.

In some cases, as has been mentioned before, that side of the thorax

which contains the liquid, becomes larger than the opposite side. The ribs and cartilages are expanded; the intercostal spaces are brought upon a level with the ribs; and, occasionally, the flowing of the liquid may be perceived through these spaces. When these occur there is scarcely a doubt concerning the nature of the malady. The dilatation of the thorax on the diseased side is more common in chronic cases than in the early periods of acute pleurisy; yet it sometimes take place in a very short time. By measuring the side with a string one can satisfy himself of its dilatation. The string should be carried around the chest, upon a level with the extremity of the ensiform cartilage, then double it, and it will be found that it will more than reach around the sound side of the chest; while it will not

encompass the diseased side; the difference will be an inch, or an inch and a half, or even two inches, as a very accurate estimate of the comparative size of the two sides, can be formed by the eye: and the obliteration of the intercostal spaces can be ascertained only by feeling or seeing them. It must be taken in consideration, that in most persons, the right side is naturally larger than the left.

Another condition of the thorax, which is opposite to the one just described, is, when the effused fluid commences to be reabsorbed - and when some cause, generally the formation of adventitious membranes, prevents the lungs from expanding as the fluid is removed - Then the ribs

must sink in to prevent that vacuum which would otherwise occur between the ribs and the lungs. Consequently the diseased side of the chest contracts and becomes smaller than the sound side. This contraction of one side of the chest is more frequently a sign of past disease than of disease in progress; and it may exist, without the health having any evident derangement of any kind.

Persons affected in this manner, appear to be inclined to the diseased side: and when the chest is uncovered it can be seen narrowed & shrunken. The circumference is less, by an inch or more, than on the sound side. The shoulder is lower, the hypochondrium is raised; and the ribs are closer together. The pressure of the atmosphere is sometimes so great as to bend the vertebral column, and produce lateral cur-

valure of the spine. The diaphragm is carried upwards, and the mediastinum is drawn towards the diseased side, under the influence of the pressure. The heart may also be drawn to the right of the sternum, by the contraction of the right pleura. The resonance given out by the healthy side, will, in this case, encroach a little upon the diseased side.

As soon as the effusion begins in the cavity of the pleura, a diminution of the resonant sound also begins and as the effusion increases the sound becomes more and more dull, on percussion. At first the dullness is rendered opposite the lower part of the cavity; and this is one point of distinction between the dullness in pleurisy and pneumonia. However the effusion augmenting

the dullness may proceed from the whole of the affected side; and this is another point of distinction; as it is very seldom, in pneumonia, that the whole lung becomes so solid as to render a dull sound over the entire side of the thorax in which the diseased lung is situated. The dull sound must, either, be uniform over the entire side; or it must change its position (except in some rare cases) as the position of the patient is changed.

It may be seen, in the beginning, that dulness comes on much more quickly in pleurisy than in pneumonia; perhaps within twelve hours from the invasion of the disease; for the reason that the effusion of the serous fluid is early and rapid in pleurisy; while the induration of the lung, in pneumonia, is gradual

and occurs at a later period; and, also, as has been mentioned before, the effusion may displace the mediastinum, and cause the sternum to give a dull sound. A hepatized lung will only render one-half of the sternum dull.

The dull sound is generally completer in pleurisy than in pneumonia. In two days, or even in twenty-four hours the whole cavity of the pleura, on one side, may be filled quite full; and the whole of the corresponding surface of the chest, will render a uniform dull sound. It is very uncommon for such a total uniformity of dulness, to result from inflamation of the lung.

In the outset of the disease, while there is yet little or no effusion, but when the pain is acute, the breathing is heard more

faintly and feebly on the affected side than on the other. The walls of the chest are also less forcibly expanded on the diseased side. ~~The sharpness of the pain~~ But percussion gives the same sound on each side. The sharpness of the pain causes the patient to expand the chest less on that side than on the other: and consequently less air enters the lung, and the respiratory murmur is feeble.

As soon as the effusion commences, the respiratory murmur is heard still less plainly on the diseased side; and as the effusion increases that murmur becomes more and more faint; while, on the sound side it becomes more distinct and noisy than natural — what is termed puerile —. And while the respiratory murmur is dis-

appearing on the diseased side + the lung is becoming empty of air from the pressure of the fluid, and the larger bronchi are surrounded by the lung, ~~which~~ which presses upon it, and by the liquid, the bronchial voice and the bronchial respiration begin to be heard. But the sounds are not exactly the same as those which are heard in pneumonia, as they are modified by the substances through which they have to pass; which causes them to be trembling or quivering; resembling the bleating of a goat; hence, the appellation aegophony, ~~which~~ which is given it. It is probable that this modification of bronchophony, is produced by the rapid wavering of the liquid, communicated to it by the vibrations of the bronchi and condensed lung. The sound is heard, most distinctly, near the inferior angle of the scapu-

lay the patient being, at the time, in a sitting posture. It disappears, when the liquid exceeds a certain amount, so as to compress the bronchial tubes themselves, and to damp their vibration.

When the quivering is strongly marked, one may be certain that there is effusion into the pleura; but when bronchophony only is heard, one cannot be so certain whether there is indurated lung between the ear and the bronchi; or liquid and a portion of condensed lung: but the diagnosis is completed by other signs.

As to the causes of pleurisy the most frequent is exposure to cold especially when the body is previously heated or perspiring. Some of the other causes are mechanical injuries, or the transfer of irritations from other parts; and the disease

in such cases is subject to be considerably modified by the nature of it cause

The ends of a broken rib may excite pleurisy; and if the pleura of the lung be wounded in that manner, air may be admitted into the pleural cavity, as well as, also, into the areolar tissue beneath the skin; constituting a kind of emphysema. Another cause, also, of pleurisy is a penetrating wound of the chest; or a perforating ulcer of the pleura of the lung. If the aperture be large enough in the former, the air will be admitted from without; in the other, it will enter from the lung. In all cases of air in this cavity, while in a state of inflamation, the effusion of pus is more likely to be the result, than when there is no communication between the cavity and the

atmosphere. But another result is the consequence of this admission of air, and its existence at the same time, with puriform and other matters, in the cavity.

When there is air alone in the pleura, it is called pneumothorax; and when the air is accompanied with liquid, the patient is said to have pneumo-thorax with effusion. The latter is much more common than the former. Pneumothorax not only proceeds from the causes mentioned above; but is sometimes produced by the operation of paracentesis thoracis.

Now, as the air occupies the higher and the liquid the lower portion of the cavity, in whatever position the patient may be placed; there will be considerable changes in regard to the sounds that are heard on percussion. When the percussion

is made upon the uppermost part it will give a very hollow sound, and when made upon the lowermost part, a very dull and flat sound. The change from the hollow to the dull sound will often take place suddenly, so that the exact level at which the surface of the effused liquid stands, can be traced. If the posture of the patient be changed, the hollow and the dull sound will change their places, also. The hollow sounding part will be much more resonant than it would be in health - more resonant than the corresponding portion of the other side of the thorax; for the air is not contained in spongy lung, but in a free space; and consequently, the sound is not damped as it is in a healthy chest, by the presence of the lung; and no respiratory murmur can be heard where this resonance

occurs; nor any trembling be felt.
The breathing of the patient is a ring-
ing, metallic sound, something
similar to that produced by blow-
ing into an empty flask, or the
barrel of a gun. During the pres-
ence of this sound, in the breathing,
the voice and cough in general, has
more strongly this ringing character,
and both are apt to be followed by
a tinkling echo. They resemble those
of a person who speaks or coughs
over an empty barrel, or a deep
well. These sounds are decisive
of the presence of air and liquid
in the cavity of the pleura, and
probably the existence of some
communication between that
cavity and the external air. Sometimes
a sound is heard, somewhat similar
to that produced by dropping a pin
into a basin of water. This is
supposed to be produced by the

dropping of liquid from the upper part of the cavity; or from the bursting of a bubble on the surface of the liquid during respiration.

Another sound can be produced from the same state — the presence of both air and liquid in the cavity of the pleura — by succussion of the patient's body. If a person lays his ear upon the patient's side and gets some one to shake him; the splashing of the liquid within can be heard very plainly. This, also, is an indication of pneumothorax; and that there is both air and liquid in the cavity; for if there was liquid only no such sound could be produced.

This state of things may last for a considerable length of time, without any decline in the general health of the patient, even when the disease is incurable —

- as it mostly is -.

Now the conditions of pleurisy, and the symptoms of these conditions may be modified by its causes. The introduction of air into the pleural cavity, indicates a more serious state of the disease than that which results from most other causes. The perforation of the pleura by a vomica has been mentioned before as one of those causes. But tubercles in the lungs are frequently the cause of pleurisy, when no such perforation has taken place. A tubercle approaches the pulmonary pleura but does not break through it: The pleurisy so produced is generally slight and partial, & ends in the formations of adhesions: it is dry pleurisy. And this adhesion between the between the costal and pulmonary pleura, in tubercular

diseases of the lungs, is one reason why perforation of the pleura, and pneumothorax from that cause, is so seldom. The adhesion generally taking place, in that part, where the perforation is likely to occur, thus preventing it.

Pleurisy may end in resolution, and complete recovery; or in adhesion, which, next to complet recovery is the best termination, and which is perfect security in the future against pleuritic effusion, though it causes some trifling embarrassement of the breathing; or in chronic disease of the pleural cavity; that is a contraction of the walls of the chest, with total uselessness, or an imperfect use of the opposite lung; or, lastly, pleurisy may terminate in death. The effusion may be so plentiful, that death will occur from sup-

fo cation, unless the fluid be removed by perforation of the thorax; or the patient may die worn out by the disease, particularly if there be suppuration, in which case he will suffer hectic fever; and death lastly by asthenia. It is seldom that pleurisy caused by, or accompanied by any other disease proves fatal.

The puriform matter which has resulted from inflamation of the pleura, may break outwards admitting the air and producing pneumothorax. This, however, is very seldom. When it occurs an abscess forms externally, generally in front of the chest; and it either bursts or is opened by the surgeon, when it is found to communicate with the cavity.

Air is sometimes effused into the cavity of the pleura, in

consequence of the rupture of dilated air cells on the surface of the lung. Gas is sometimes generated within the cavity from the decomposition of the liquid effused, or of a gangrenous lung; in such case the gas has a strong odour: it is said that gas is sometimes secreted from the membrane. All of these are very rare cases. Air shut up in the cavity of the pleura, and constantly accumulating will compress the lung, as effectually as if there were a liquid in its stead. And if such compression is sudden, it may cause speedy death by apnoea; and this is more apt to occur, by the edge of a broken rib, scratching the pleura of the lung, than from any other cause.

The treatment of pleurisy is the next and last thing to be

considered in connection with this disease, In the outset it is necessary to have recourse to the lancet; and more especially as bloodletting is better borne in inflamation of serous membranes than in any other case. If the patient is seen while the stitch is in the side and the restrained and cautious respiration is present, it is best to bleed him, in the upright posture, from a large orifice, until the pain is relieved, and he can draw a full breath again with ease; or until he is near fainting. If the pain and short breathing should return again, and the pulse continue firm and hard, the bloodletting should be repeated; or the painful side be covered with leeches; or blood be abstracted by cupping. The blood drawn in this disease is always deeply buffed. In chronic

pleurisy, if there be any suspicion of tubercle in the lungs, if the patient be delicate, or of a consumptive family, or very young, or very old, leeches are all that must be used.

Mercury from its power to check the effusion of coagulable lymph, is especially indicated. It is to be given until the system is brought under its influence, and guarded against by a small quantity of opium. In very severe cases, or when the internal use of mercury is in any way contra-indicated, recourse must be had to mercurial inunction — the linimentum hydrargyri, or the mercurial ointment.

By the early and vigorous application of these measures, the inflamation may generally be subdued in a short time. If though the fever diminish and there still be pain in any part of the chest,

leeches may be again applied, or the part may be covered with a blister.

But though the pain may have ceased, and no fever remains, and the patient does not suffer any dyspnoea of any account, there often will be evidence of liquid in the cavity of the pleura. Now to get rid of this fluid, the patient should be kept on a low diet; the gums kept tender with mercury; by applying blisters one after another to the affected side, and by purgatives and diuretics. A very good form of diuretic in this condition is a combination of half a grain of digitalis, one grain of squills, and from three to five grains of blue mass, repeated and continued according to the state of the mouth.

But in other cases, though

the fever and inflamation are at an end, and absorption of the liquid takes place, the parts within the thorax do not return to their original condition. This can be seen in the shrinking of the side affected, which has been described before. This shrinking and narrowing of the affected side is the consequence of the compressed lung being prevented from dilating ~~it being~~ bound down by thick and false membranes when the liquid is absorbed. In this case the deformity is irremediable, and lasts for life; and as the bony framework of the thorax can yield to a certain extent only, there will very often remain some liquid in the pleural cavity. If again, the lung recover a part of its lost volume, and meet the contracting walls of the chest, ad-

hesion may take place, and the cavity of the pleura be obliterated by thick layers of false membrane. And other changes are apt to arise in the lymph which is adherent to the pleura in these cases of imperfect repair. Sometimes tubercles form in it. Sometimes ossific matter is deposited. There is yet another supposable case: The investing adventitious membrane may be thin and weak, and yielding; and though the lung may not expand to its full dimensions at first, it may gradually force its way against the binding power of the coagulable lymph, and then the external configuration of the chest, and the symmetry between the two sides return.

There are yet other cases in which the effusion continues

increases, and the side, instead of shrinking, enlarges; the functions of the lung on that side are entirely abolished; and the use of the remaining lung is greatly interfered with, by the forcing of the mediastinum upon it; and the patient is in danger of suffocation. In such cases whether the effusion has taken place rapidly or slowly, the lung must be relieved by letting the fluid out; and the sooner that is done the better.

The operation of paracentesis is not very difficult, nor formidable; but a mistake in the diagnosis may be very formidable. The necessity of being sure of the true nature of the case, is exceedingly great, before proceeding to open the chest of a living person.

One must examine the chest well before plunging a

trocar in it. If a person sees by the eye, and ascertains by measurement, that one side is larger than the other; if the intercostal depressions be effaced on that side; if the whole surface render a dull sound when percussed; if the side do not move at all, or scarcely move, during respiration; if no vibration can be felt on that side when the patient speaks; if no breathing can be heard in the corresponding lung; if the heart be found beating in an unnatural place; and if, at the same time the other side of the chest shall move freely, sound resonantly, communicate a thrill to the hand while the patient converses, and be full of puerile respiration; then we may be sure that the larger side is distended with fluid

But the propriety of opening that side depends on circumstances.

There are two objects for which the operation of paracentesis thoracis may be contemplated. In cases of simple pleurisy, it may be adopted with the view of saving life and restoring health. Again, when pleuritic effusion is complicated with other and mortal changes, the operation may sometimes be resorted to for the purpose of relieving urgent distress, and of prolonging a doomed existence.

In simple pleurisy it ought never to be performed unless the life of the patient is or seem to be in jeopardy, from the continued presence of the liquid within the thorax.

Now, there is great danger of death, when the lungs and the heart, are prevented, in some

measure from performing their functions; when symptoms are present of approaching death by apnoea, or syncope. If there are no other causes discovered for those symptoms, except the increasing pressure of the liquid, or of air, in the pleura, they are ascribed to such pressure, and the practitioner is bound to act accordingly. Whenever there are, with the physical signs of abundant effusion, great hurry and distress in breathing; an anxious and livid aspect; a tendency to delirium - or extreme faintness, and a vanishing pulse - there is no time to be lost: the mechanical removal of the fluid must be accomplished; or otherwise the case would be a fatal one.

Again, when the patient, without suffering much dyspnoea while he lies quiet, is losing his

strength daily, and early death by asthenia appears to be inevitable; and when all other means for getting rid of the liquid have failed; and when no other condition of the disease or of advanced age exist, to account for the sinking; then, also, the patient should not be denied the chance which the operation may afford.

And, thirdly, whenever the effused matter consists of pus, it should be let out.

Before proceeding to evacuate the cavity of the pleura, by the operation of paracentesis, it is well to adopt the expedient of trying the chest by means of a grooved needle. As a diagnostic measure it is highly valuable. It ascertains whether there really is liquid in the cavity of the pleura, the kind and quality, and the exact

place it is situated. If it be puriform and thick, it will not exude so freely, but a drop or two will probably be seen at the outlet; and when the needle is drawn out, pus will be found in the groove. In the former case there is likely to be no false membranes; in the latter they are likely to be thick. To evacuate the thick fluid, a larger trocar should be used.

"The puncture is harmless; and produces trifling pain. The trocar should be sharp; for otherwise if there happened to be thick tough layers of coagulable lymph, not very closely attached to the costal pleura, they may be pushed before the instrument, and the liquid will not be reached.

As to whether or not all the liquid should be let out at once, has not been settled by the profession. Some say yes: others no. I think that the

opinion of Dr Watson on this point ought not to be disregarded. He thinks it very probable that when the serous membrane is stretched by the pressure of its contents, its natural absorbing powers may be lessened. But he has no reason to suppose that the mere relief of this tension will often suffice to renew the process of absorption, and to enable the flattened lung to re-expand.

We say: the theoretic objection to the thorough emptying of the thorax in such cases is, that the introduction of air is likely to be hurtful, by converting the adhesive into the suppurative form of inflamation, and by promoting decomposition of the extravasated fluid. No doubt there is risk; but in general, if you wish to empty the pleura, it cannot be avoided. Unless the lung rises freely at once, the liquid cannot all, nor even much

of it, come out, without air getting in. But the mere admission of air into the pleura does not necessarily create inflamation of the membrane. This he knows from what happens sometimes in emphysema produced by a fractured rib. He says, in the only instance of pure pneumothorax, which he ever saw, the sac of the pleura had become half filled with air, through a very minute opening in the pulmonary membrane communicating with the air passages. There was no inflamation of the pleura in that case. Except that it was preternaturally dry, it seemed perfectly healthy. Neither does the access of air necessarily superinduce suppuration in the membrane already inflamed. Certainly, if pus follow the passage of the instrument as much should be removed as we can get. And, he says, for his own part, he

should take away as much as would come, whenever the inclosed liquid proved to be serous. If much be left behind, a repetition of the operation will be commonly required. Air disappears spontaneously with greater readiness than serum; and exposes less resistance, while it remains, to the gradual re-expansion of the compressed lung. Should any one desire however to evacuate, as some advise, so much of the liquid & no more, as the expansion of the lung, and the elastic resilience of the thoracic parietes suffice to press out, without admitting air - that object may be insured by adopting a very simple contrivance of Professor Schuh's of Vienna which was recently shown him by Mr Spencer Wells. It consists of a sort of small trough which is readily fitted to the end of the canula after the trocar has been withdrawn, and which is provided

with a valve that prevents any reflux of liquid or passage of air from the trough into the canula. In this way the entrance into the pleural sac may be effectually obviated.

Again as to whether the orifice is to be healed up or kept open is also unsettled. Here, also, the profession differ; and again the opinion of Dr Watson ought not to be disregarded. He says; if pus come out, by all means make the aperture large, and keep it open; & inasmuch as detention of the pus would be injurious, and the depending point is difficult to hit, & the orifice is apt to clog, he would do more than leave it open; he would draw the puriform fluid off twice a day by a Syphon.

If serum be let out, by all means close the wound and heal it. Then if all go on well, our object is ach-

ieved. But should the condition of the patient fail to improve; should hectic fever, after a day or two, set in or even continue; should much constitutional distress or disturbance arise; — under such circumstances the wound should be reopened; as there is, in all probability, pus from matter pent up in the pleura; and even stinking and poisonous gases.

There is yet a third question of some importance; which is, also, undecided. Where should the opening be made.

If any soft inelastic tumour has appeared, marking a tendency in the effused fluid to make its own way outwards, that tumour should be punctured without loss of time; for there will then be no chance for the reabsorption of the pus; and if the swelling be left to itself, troublesome,

burrowing sinusses will be apt to form in the thoracic and abdominal parietes. As there no choice about the place where the aperture is to be made, in such a case, authors have termed the operation the operation of necessity; but where the surgeon is at liberty to introduce the trocar wherever he please; they call it the operation of election. Now what is the best spot for this operation of election.

If there be any part of the surface of the thorax which is resonant on percussion, or which affords any sound of respiration, that part must be avoided; as it is probable that the lung in that place is adherent to the costal pleura. Any place that the heart is seen or felt to beat, that place must also be avoided.

The object to be kept in

view is that of making the opening in the place which will allow the liquid to flow most freely and perfectly. The space between the sixth & seventh ribs, where the digitations of the serratus major meet those of the obliquus externus muscle is the place usually recommended. Some prefer the space between the fifth and sixth ribs: And to support this preference, they say that, on the right side, an enlarged liver frequently reaches as high as the sixth, or even as high as the fifth rib, and that when the diaphragm is pushed as high as this there is a risk of penetrating it with the trocar. Now I have no doubt but what in a healthy chest, an enlarged liver may reach as high as stated above; but I should think that, as the pressure within the thorax is so very great, it would leave the

effect of forcing even an enlarged liver downwards and of displacing it beyond its natural position; and as a consequence it would not so likely be reached. I find however, after further investigation, that experience disproves my assertion.

It may sometimes be necessary to puncture the cavity for sero pneumothorax: the diagnosis of which is not very difficult. The existence of the cause, the tympanitic sound yielded by the chest on the injured side, the absence of the respiratory murmur in the tympanitic part, and the increasing dyspnoea, all point to the same conclusion. A trocar of the smallest size or even an acupuncture needle may suffice to give vent to the imprisoned air, which will escape with an audible hissing sound. In

some cases it exists in very large quantities.

The necessary operation for puncturing the thorax, arising in cases of pneumothorax depending on specific disease in the lungs, cannot be regarded as curative. Yet if it prolongs life for a time, prevents suffocation, and relieve existing distress, it is not without its value. It has never been known to have been followed by entire recovery.

This concludes my thesis upon that very common ~~disease~~ and one of the most frequent of the inflamatory diseases - Pleurisy - its anatomical characters; its symptoms, course and duration; its cause; its diagnosis; its prognosis; and its treatment as usually laid down the text-books on that subject.

I have been compelled to

introduce pneumothorax and empyemia, throughout the disease of which I have been treating as they are so closely connected with it;- pleurisy sometimes being the cause of them; and they sometimes being the cause of pleurisy- hoping that the digression may not be out of order.

I have ventured to express an opinion only once and in that I found that I was not supported by the experience of others

1864

An Inaugural Dissertation On Opium

Submitted to the Examination of the Provost Regents and Faculty of Physic of the University of Maryland For the Degree of Doctor of Medicine

By

Jno. F. B. Weaver
of
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Maryland

Opium

The Papaver somniferum. or Poppy is an annual plant, indigenous of Asia, as well as of Egypt.

This specimen, of the vegetable kingdom yields a substance denominated Opium, which is obtained from the unripe capsules of the plant; on which account the poppy is sedulously cultivated in oriental regions.

Different varieties of the plant are recognized, viz:- the white and the black. The former however giving the greater product-

cacy, necessarily claims the greater attention.

Five different kinds of Opium commerce is supplied by: The Smyrna, the Constantinople the Egyptian, the Persian, and the Indian.

The Smyrna is the most valued and is consequently the most largely imported. Inasmuch as the remaining varieties are greatly inferior, they are not considered deserving of any special comment. It is true they are said to possess all the virtues of Smyrna Opium, but many of them.

if not all, do not approach in strength, to what is called uniformity. On this account the Persian variety is seldom used, so, the Opium of Hindostan, which appears to be little more than a mere object of curiosity.

Should the inferior varieties continue to be imported to this country, it is advised that they should altogether be made use of for the preparation of Morphia.

The composition of Opium is very compound:- Morphia narcotina Meconic acid codeia narcein

meconin, caoutchouc, feculæ, resin, oil and several other less important substances enter into its composition. It is not within the scale of human keen to render the Medical world, or any portion of it interested in the history Opium, capable of affirming at what precise period this important therapeutic agent first received the title of a medicine. It is however alleged to have been known, and doubtless to have been used from the earliest periods of Grecian history.

We can however safely surmise that at that early period, much less must have been known of its properties, than is now within the knowledge of the present generation.

The athletic embonpoint, the Herculean power, and the unrivaled health of the ancients, must to be envied by subsequent generations, rendered the employment of Opium seldom necessary. Consequently it was not required of them to cultivate the plant so extensively, nor to attain to so exquisite a-

knowledge of its medicinal
virtues as has necessarily been
the case with (modern) gener-
ations.

Speaking of the constituents
of Opium, it is worthy of
notice, that it is the Mor-
phia which it contains which
has mainly rendered
this valuable plant of the-
rapeutics so estimable. The
greater this ingredient enters
into the composition of
Opium, the less are to be
found such minor sub
stances as: narceine meconine,
and meconic acid; a sui

generis principle is also worthy of mention

Although Opium is generally imported from the Levant, yet arduous and indefatigable efforts have been made to cultivate the Papaver somniferum in America. The hopeful anticipations attendant upon the endeavors to cultivate this exotic in these parts of the world, when it is not indigenous were but partly, if at all realized

The article is consequently imported from such Oriental parts from whence the best

varieties can be obtained.

The effects of Opium upon the human frame, like all substances used for medical purposes, have a primary and secondary operation — a direct and an indirect action both being diametrically opposite.

The opposition or contrariety of these two influences is much more marked by Opium than it is by the primary and secondary effects of the majority of the remaining number of therapeutic agents.

The direct, or primary effects of Opium, or any of its preparations are what is sought after. This is the case, not only when the therapeutic importance of the drug is brought into requisition; But to evade its indirect influence or rather its secondary actions the habitual, and habitable Opium Eater is necessarily obliged to swallow increased quantities, at shorter and shorter intervals in order to escape its secondary effects. This primary operation of Opium is mostly observable

upon the nervous system.
Other parts of the body, seem
indirectly; to be more or less
the recipients of its operation.
But Opium deserves more
credit the title of a cerebral
stimulant than does any
other medical agent. It is
true, it has not the immed-
iate exhilerating effects which
alcoholic spirits are capa-
ble of effecting; but when
its influence is once properly
established it is not only
much more prolonged, but
its operation is far more pow-
erful and furthermore; it

does not bring about that
loathsome and contemptible
state in which an individual
is placed when under the in-
fluence of alcoholic inebria-
tion's
Instead of the mental faculties being prevented; the action of Opium causes them to be raised to their highest point of function; Hence literary characters are prepared with more brilliant and better ideas. The orator is capable of using an eloquence, with more ease, and of a power far exceeding the result of

his previous efforts. The pleas which the lawyer urges before a court of justice in behalf of an unfortunate culprit do not so ill compare with the arguments of a Mansfield, a Blackstone or a Hale. The poets brightest fancies, his most exalted feelings are equally generated upon, in a similar manner; and only a Mozart, or a Beethoven, or such others as approach to a similar degree of attainment in vocal or instrumental music are superior in having more refined

conceptions, and more exalted ideas, in as far as the concordance of sounds obtain than the unhappy opiophage enjoys at the time he is under the primary or stimulating influence of Opium. As a further result; and much in conformity to this emotional elevation, an increased muscular energy is exhibited. The ability to bear fatigue, to sustain inordinate physical exertion or to undergo deprivations of any kind — is remarkably increased under the direct effects of Opium

Even the power to sustain, for a long time, and to a remarkably protracted extent, the deleterious effects of cold, are surprisingly augmented. So soon however as its stimulating effects have expired, the reverse is the case. Although, as before observed, Opium ranks, very prominently in the category of cerebral stimulants; yet its influence upon the human body is, in numerous respects, different from other medical agents placed in the same list; and

in some instances it proves quiet opposite. So great are its effects upon the encephalon, that there is hardly an organ entering into the anatomy or structure, of the body; but what is through it primarily and secondarily affected: Excepting the brain, the Stomach is unquestionably the recipient of more the immediate, if not also of the remote effects of Opium, than is any other important organ. This valuable functionary, when assailed by

a full dose; or, even by a moderate quantity of either crude Opium, or by any of its preparations, becomes excited; and, as if frightened it digests the quantity in hurried rapidity. On this account the effects of Opium are much sooner experienced in persons not accustomed to its use, than in inveterate Opium eaters. The system becomes gradually accustomed to its habitual use and finally refuses to respond to an ordinary quantity; consequently,

the dose must be continually enlarged.

The notorious power which Opium possesses in suppressing the secretions renders it a valuable therapeutic agent in many alarming diseases. To this power may be assigned the want of appetite, the diminished amount of gastric juice, the anorexia as well as other derangements of the physiological visera. The uropoietic organs are variously affected. In some instances it acts as a diaphoretic; but

in the majority of cases the normal quantity of urine is greatly lacking. Besides there is not unfrequently a difficulty of micturition accompanying this renal derangement. Its action upon the skin corresponds with its effects upon the secretory organs. The cutaneous surface is rendered dry and feverish. The mucous surface of the mouth, tongue, fauces is sensibly diminished. Even the Schneiderian membrane of the nose, as well as the lachrymal function, —

vince a similar condition.
Profuse sweating, however is
a constant attendant upon
any attempt an immediate
Opium-eater makes to abdic-
ate his accustomed practice,
no matter how low the tem-
perature of the atmosphere
may be.

An immediate effect of
Opium upon the skin that
is worthy of notice is the
itching it produces upon
all parts of the body. This
distressing symptom is exceed-
ingly annoying and in
many cases actually prevents

the patient from enjoying his nocturnal repose. Miliary, erythematous, or urticarious Eruption is said to have been observed by some enthusiasts, by which they account for this cutaneous distress. But this imitation of the dermal structure is seldome productive of any eruption so far as the writers experience extends; and might if at all present, be more justly attributable to some other cause.

The Therapeutic applications of Opium are extremely numerous as well as various,

and the extent of its employment exceeds that of the majority of medicines. There are few diseases to which human flesh "is heir," but what present indications for its remedial virtues and few pathological affections exist; but what Opium, if not the chief is the sole therapeutic agent called into requisition.

By virtue of its direct stimulant influence upon the cerebral centres it is especially indicated in diseases. The anodyne power,

of Opium ranks among the most important parts of its action. Indeed as a palliative in neuralgic affections, it cannot be surpassed and stands first upon the category. In gastralgia it is the first remedial agent employed. Spasmodic cholic, as well as pains of all kinds to which the digestive organs are occasionally subject, yield readily to the anodyne action of this invaluable medical agent. The intense pain attendant upon the passage of a biliary

calculus; as well as the agony attendant upon the passing of a similar product- Though the ureters can readily be — speedily conquered by the anodyne properties of opium. Its control over the secretory functions has been before — hinted at; yet in inexperienced hands, or in inordinate doses it certainly is a dangerous medical agent, having a typhoid character. The depressed state of the brain indicated by stupor, delirium low mutterings and by subsultus is not a contra-

indication. Such a pathological state is owing to the debility of the nervous centres and being a cerebral stimulant. Opium would not be improperly resorted to. Its value is still more appreciated in fevers when we consider its power in suppressing those morbid debilitating discharges attendant upon a typhoid state. In insanity Opium is frequently brought into requisition; and in delirium tremens it is absolutely indispensable. In tetanus it is almost

invariably employed; but in the three last-named diseases, the quantities given must be enormous and frequently repeated even then alarming by large doses often prove abortive; producing either no effect, or but a moderate or temporary one.

In symptomatic diarhoea, which is often favorable to idiopathic affections, Opium would be certainly contra-indicated. Many other forms of disease accompanied by malignant ejections, which by their retention in the -

system, would forbid the employment of this inestimable therapeutic agent; on account of the powerful effects in suppressing normal as well as morbid discharges.

Opium is frequently used in conjunction with other important therapeutic agents. It is administered in conjunction with Ipecacuanha, Calomel, Camphor, and almost equally as often with other important medical agents, The object of such combination is mainly

to prevent the undue ex-
hibition of medicines thus
combined. Other substances
are frequently employed,
in combination when the
sole action of Opium
is desired; but this is sim-
ply done to disguise the
remedy and thereby overcome
any prejudice the patient
may have entertained aga-
inst its employment.
So numerical are the path-
ological phenomena, to
which Opium is applyed,
that the order I adopt space
to enumerate sufficiently

all the important uses
of the drug.

1864

Inaugural Dissertation.

of

Abortion.

for the Degree of Dr. of

Medicine.

in the

University of Maryland.

by

D. Edwin Stone.

Abortion

This is a subject on which I cannot expect or hope to offer any thing new. When I think how much has been said by men with years of experience [illegible] opportunities — are almost unlimited and they striving to expound all that seemingly could be there seems but little left for the inexperienced student one as it were just nearing the beach of the vast ocean of the science of medicine or remedial agency therefore you and I must rest satisfied with what I have gleaned from books. The subject under consideration is one that should be well understood, both its nature and treatment. This [illegible] would be a proper place to define abortion or to state what I understand it to mean. It seems most a [illegible] to the expulsion of the fœtus from the [illegible]

[illegible] it has reached the period of viability or before the last of the sixth or commencement of the seventh month. Now this may take place at any period between the commencement of pregnancy and the last of the sixth month. The older writers used the term *effluxio* for this accident when it happened as early as the seventh day and others since have used the same term when abortion occurred before the third month. The arrangement of M. Guillemot seems a very rational one he admits three varieties of abortion founded on its period of occurrence — thus when abortion takes place as early as the twentieth day he terms it ovular abortion embryonic if before the third month and foetal from that date up to the sixth month of gestation. This accident says Cazeaux happens more frequently in the early stages of pregnancy — i.e. during

the first two or three months than at any subsequent period: and he accounts for it in this way — the very vascular lining membrane of the uterus becomes the decidua and the case with which effusion of blood may take place into the space which originally exists between the chorion and the reflected portion of this same deciduous membrane — this also explains the frequency of hemorrhage and consequently of abortion in the early months. There has been objection made to this explanation but not by those having the same opportunities as Cazeaux. It is thought by some that abortions of female foetuses are more frequent than those of the male sex but why this should be the case we cannot see, it may be as stated by Cazeaux, the difficulty of distinguishing the sex in the early periods of intra-uterine life, may have some influence

in creating the popular error. The history of abortion must necessarily comprehend the study of causes producing it, the symptoms and consequences which may arise the signs by which it may be detected, and the most suitable indications for preventing, or opposing it. Let us now examine the causes of abortion; it may be divided into two classes viz – spontaneous and accidental the term provoked has been used also where abortion has resulted from criminal efforts or from the measures used by the scientific physician with an honourable object. Spontaneous abortion may arise from the constitution and general health of the mother, from diseases of the ovum itself and from the condition of the uterus and its appendages. Women of full plethoric habit and having copious menstrual

discharges are more exposed to this ac-
-cident during the early months of preg-
-nancy: it seems that at each monthly
period there is a sort of increased predis-
-position to abort, we should advise the
patient to keep quiet and composed
and if you know her predisposition to
abort, to be great, it may be advisable for
her to resume the recumbent posture for
a few days at each successive return of
her time for menstruation during the three
first months but I do not think it would
be well never to exercise for this is valuable,
therefore exercise constantly but moderately
between the periods mentioned: this idea
is founded on the fact, or, knowledge of
the fact, that women who live sedentary or
indolent indoor lives abort very readily
or frequently. Again the condition of the

=atmossphere has something to do with abor=tions this is the way in which these epi=demics of abortion are accounted for, as spoken of by so many authors it has also been shown that women living in bleak mountainous regions are very subject to this accident and in some places they are in the habit of descending into the adjacent plains to escape the accidental acute dis=eases - abdominal, thoracic and recent cutaneous diseases often operate very delate=riously on the pregnant woman and give rise to miscarriage. Syphilis in the mother is very disastrous to the child in utero and the mercurial treatment does not always secure from abortion: and some writers that it even endangers the life of the foetus, but this opinion is rejected by most modern writers on syphilis and they show very clearly

that there can be nothing better done to prevent the trouble now in question than to use this treatment from early conception. Duval says that it is not uncommon for a woman laboring under constitutional syphilis if treated in this way early and long enough, to carry her child to full time, and for it to escape the poisonous effect altogether, to which it would fall. Now the author quoted above thinks much depends on the length of time the disease has run, he says in its incipiency it is not near so destructive to the foetus as when it has run on for a long time, but there is no time to be lost in the treatment. Besides the dangerous influences incurred when the cause of the defective condition of the maternal system to destroy it there may

be defect in the germ itself, for instance there may be the syphilitic taint in the father, the vitiated sperms of old age, or from debauchery may communicate to the new being a principle which will or may destroy it sooner or later. As we have seen the mother may communicate to the foetus her disease, it is not unusual for children a few weeks after birth to show all the symptoms of syphilis received from the mother during intrauterine life and hence it is easy to see how this hereditary taint may destroy the foetus in utero. Small pox is also transmitted in this way from mother to child and thus destroys it. Then again poison and as small pox may be transmitted through the mother to the child, her body acting as a mere conductor without it affecting her.

The famous Mauriceau states that his mother just before his birth was attending to his brothers labouring under smallpox and was not effected herself but when he was born he presented several small-pox pustules. Then again the life of the foetus may be destroyed by certain changes in the placenta such as atrophy, hypertrophy, or become inflamed and its tissue degenerating hardening or forming a fatty tumor and it is not uncommon to find collections of purulent matter in its substance; sanguineous ones are more frequently found the volume of which varies from the size of a pea to that of a large nut. These clots exhibit all the changes which the blood passes through whenever it escapes into the substance of the tissues. This disease designated by M. Cruveilhier as placental

apoplexy is reproduced at different times and the collections but increasing in ... ultimately invades the greater part of the mass and this must interrupt the Foetal circulation and cause the death of the foetus. Similar effusions may take place in the different layers of the ovum for instance between the Amnion and Chorion and between the decidua and the Chorion. Among other causes we have thought the insertion of the placenta over the neck productive of abortion but from what I have been able to learn it seems the trouble it would produce would happen too late in pregnancy to be considered abortion. Again there has been considerable stress placed upon the strictures of the cord, some think it may destroy the foetus by being ruptured or by dragging

off the placenta, or by its tension impeding the circulation, and from what Churchill says and what Stein and other have said we must consider that there is some truth in it. After all these there are certain diseases and conditions of the uterus that play an important part in abortions, among these are tumors and growths of different kinds resulting from different causes and affecting various parts of the organ (the uterus) their effects being modified by their size and nature. Then again we find abortions produced by a peculiar irritability of the fibres of the uterus and also a rigidity or some thing that will act as an exciting cause, we find the want of distensibility more particularly in primipara who have become pregnant very early or very late in life. But some

Of our best authors rather choose to attribute it to the peculiar irritability of the womb in such case, and in proof of this they state numerous cases of women aborting two, three, or four times and then carrying the fœtus to full time as they say in the same manner accustoming it to its function by wearing out in a manner its irritability, in other words the womb has to habituate itself to its new functions. Hence it is thought by Cazeaux that the uterine congestion occurring in plethoric women and produced by the menstrual periodicity (already alluded to in former page) And that species of sensibility or rather irritability met with in virgin females are the only two causes belonging to the uterus proper, next and lastly we may add among the exciting causes ulcerations and inflamations

causing adhesions which may prevent proper expansion or dilation, and the various displacements such as prolapsus, lateral obliquities, and the tilting forward or backward (anteversion and retroversion) of the uterus. That is something to be said on the appendages, there may be mis-placement and deformity in them, there may be organic changes in the tubes, there may be unnatural adhesions of the broad and round ligaments, tubes, or ovaries, all these must be regarded as sometimes producing abortion. It is also known that inflammation of the neighboring organs, such as bladder or the rectum, communicate this irritation to the womb, and thereby bring on contraction, which may terminate in the expulsion of the fœtus. Tumors of large size, situated within the cavity

of the belly, have been known to interfere with the growth of the uterus and consequently that of the child. Women who wish to hide their shape during pregnancy, have produced miscar=riage, by tight lacing, and also by not taking sufficient nourishment, on account of it making them look large. Now it seems to me a woman should not wear dresses as tight as she can hook it, for by hooking a little at a time, she may produce an amount of [illegible] or compression greater than that [illegible] by tumors which we have seen cause abortion when situated in the abdomen. Deformity or malformation of the pelvis, some times met with, serious=ly makes against the rising of and develop=ment of the uterus. These are termed slowacting causes. There are those as I have

said known as accidental causes.
These are such as act from without, and make their effect visible more prompt, such as falls, bruises, scares and great exertion, as in the case of the woman we had at the Baltimore Infirmary in the latter part of December 1813 she stated that her house had taken fire, and that she had used some exertion and beside was very much frightened, and the consequence was she aborted in a day or so, and being dangerously ill she was brought to the Infirmary where her case was treated and explained by our late lamented friend Dr Chew but it was beyond the power of human wisdom and the art of medicine to save her she came apparently in a voiceless condition, and

in the course of 8 or 10 days she died. I should have stated she lost the great amount of blood alluded to, by the miscarriage. Women have been known to slip on descending stairs and forcibly striking their seat would get up with their clothes wet with blood and an ovum of six or eight weeks shortly expelled. We have said bruises cause this accident and so they do; and like falls may produce it in two ways either by bruising or violently irritating the womb, or injury done to the foetus itself causing its death. There are cases recorded of children being born with broken bones, and of their uniting again at right angles while others have had large bruises at birth. Then on the other hand

it is truly wonderful how much some women have endured without it effecting a miscarriage whether from accident or criminal intention I know a young woman who on finding her menstruation to stop for some time considered herself pregnant, and determined to produce abortion if possible to hide the illegitimate pregnancy. So she tried jumping out of a window a distance of six or eight feet and alighting with out allowing her knees to bend any more than she could help, this must necessarily give a wonderful shock to the system, This she would repeat once or twice a day during the first two weeks of the second month

But her pregnancy went on to full, to full term. Again I knew a married lady, to fall from a cherry tree a distance of thirteen feet, (being at this time four or five months pregnant) without the slightest trouble from the effect of the fall as far as the fœtus was concerned she soon recovering from the bruises she received by the fall. There are many measures resorted to by criminal hands which it is useless for me to enumerate. As regards the signs or symptoms of abortion they are numerous the cause of the accident, and the period of the accurance having much to do with their appear=

=ance Thus if abortion occur in a few days after conception the physical disturbance will be so slight, that the woman may and, most likely will not take it to be more than a difficult men=struation. It is thought by some the later abortion happens, the more severe its effects are, the pain being greater than in labour at full term, and on the other hand some of the best authors dispute the fact of its being the case. We have said, causes exercise a modifying influence, over symptoms and so they do. For instance the cause is bad health in the mother, or diseases that operate slowly by altering the genital

organs of the ovum and its mem=
=branes, In these cases we find the follow
=ing symptoms, or most of them, viz
shivering followed by a sense of heat,
nausea, thirst, loss of apetite, depression
of spirits, redness & tumefaction of
the areolas, a sense of sinking about
the epigastrium, weight near the
vulva and anus, frequent and
imperfect desire to urinate, with
a soreness & flaccidity of the breasts,
with an occasional exudation of
serous fluid, and pain in the
loins &c. These symptoms go
on This pain increases and extends
round to the hypogastrium. The pain
comes and goes but the intervals
get shorter and shorter between them
till they all the characteristics of regu=

=lar uterine contractions come on,
as these contractions are progressing
there is an ichoris discharge from
the vagina, followed by bloody or
sanguinolent discharge. If we make
an examination now per vaginam
we will find the neck partially di=
=lated and the dilatation, still advan=
=cing with the return of each pain
soon after we detect the sack containing
the waters, forming, followed by their
rupture and the escape of the waters
Generally the expulsion of the foetus
soon follows. The rupture and dis=
=charge of waters with the secundines
In these cases of abortion the cause
being slow in action, as in diseases
of the mother or the ovum the foetus
is generally dead, some times it lives

until after the first pains. When abortion is consequent upon some violence as in the case of a woman sleping in decending the stairs and striking her seat as before mentioned in preceding pages where a young ovule was suddenly driven out with a quantity of blood. Of course this must take place during the first few weeks, while the connection between the uterus & ovum is very feeble. Or a later period a longer time will elapse between the accident and the abortion.

The phenomena offered in these cases vary according to whether the accident has affected the mothers organs or the foetus itself. In the former case the mother is seized at the time with [illegible]

in the loins usually but sometimes in other parts, as the abdomen. This pain often a day or so subsides and in a few days sets in again with increased violence and almost immediately (labor pains) follow, the foetus is often born alive. The expulsion is almost always effected more slowly than at full time.

When the cause has produced this effect by its action on the foetus immediately as by a blow, violent concussion, or subjectively as by destroying its vascular relation with the uterus, then the cause of abortion is different. Sometimes the signs of the death of the foetus are the first to be observed. After a short time the agitation and fears wear off, the woman feels no pain nor inconvenience; everything is calm and seems all right,

but in a few days the movements of the foetus which up to the time had been natural, become weaker and are separated by longer intervals and presently altogether disappear. After this all the unpleasant sensations and digestive disorders which had annoyed the patient from the outset of pregnancy now disappear the swelling of the breasts and prickling sensations also diminish or cease entirely. Abortion is now certain, the ovum is now a foreign substance in the uterus, this irritates this organ and contraction is then induced and the expulsion is the consequence. The length of time the foetus may lay in the womb after death varies from seven or eight days to as many weeks before its expulsion. In these cases when labor comes on so long after the childs death there is very little

blood lost, less than in labor at full term, owing to the diminished action of the uterus placental vessels, than after the death of the child in a great measure become obliterated, or in the separation of the placenta hemorrhage does not take place. Writers have said a great deal about the influence of a dead foetus affecting the mothers health, and go on to give a great many signs by which we may detect it; but, as Cazeaux says they never appear I shall not mention them, he think there is little danger of the mothers health from carrying the dead foetus if the membranes have not been ruptured, for until this, putrefaction does not go on, & when this has happened and the foetus has come in contact with air then it may putrefy and give rise to

bad effects on the mother, then we have symptoms of fever, a dark, fetid substance oozes from the genital parts containing shreds of putrefaction and if nature does not relieve herself of this source of infection, soon the woman rapidly sinks under its detrimental influence. Again abortion may be brought on by two children in utero. When this is the case the twins are expelled simultaneously, although we have seen that women may go on to full term after one foetus has been expelled. After all there is nothing connected with abortion so perplexing as its diagnosis. There are many symptoms, but these are so deceitful that you feel when you are called on to diagnose a case as if you knew less than nothing after

having the woman state, and this you have to go by partly, for in the early months it is very difficult for you to ascertain whether the woman be pregnant or not, let her be ever so honest and intelligent. We generally think a woman who has enjoyed good health is pregnant if she ceases suddenly, her breasts enlarge and her body increases in size; then all of a sudden at the return of the fourth or fifth menstrual period there signs of uterine congestion appear, last for a day or two and followed by a slight discharge of blood; now it is hard to tell whether this is a return of the menses that had been interrupted or the forerunner of abortion. The pain connected with difficult menstruation often

detention for some time is very similar to those attending abortion. Madame Lachapelle places great stress on the state of the uterine orifice, she says if it be abortion the uterine orifice will be found open and the hemorrhage will precede the pains, the latter [illegible] notwithstanding there may be a copious discharge; While on the other hand the orifice remains closed and the pains cease when the discharge is established. This is not invariable the case but we cannot find any much better rule. It seems to me that a thorough examination of circumstances before and after the suppression of the menses and an examination of the uterus, should afford ground for a conclusion reliable as any we can get at in the early months

after the fourth month we may have access to the sensible signs such as auscultation and ballottement, in this way we determine pregnancy, and this is the trouble in the early cases since it happens during the first two or three month. It has been thought by some that the shape of the clot of blood might tell something; for instance the clot should be triangular it would show it had been formed in the unimpregnated uterus. But this seems to me uncertain for its shape most likely would be changed in passing through the cervix uteri. Again it has been thought there could be nothing told from examination, from the fact that a ovum so closely resembles a clot to touch. But Hall has laid down a rule which he thinks will hold good

in most cases, for instance when the finger introduced we perceive the mass to grow tense and advance toward the vulva and increase in size during contraction it is an ovum engaged in the uterus; while on the other hand if it were a clot it would not harden on being pressed by the contractile forces of the womb, nor does the ovum have the fibrinous appearance of the clot, the clot does not seem to advance toward the finger during pain but rather becomes compressed, and as the ovum resembles a soft bladder it on being condensed will present a rounded extremity instead of the sharp point of the coagulum. From our knowledge of the form of the uterus we would know the coagulum must be the shape of a cone with its apex downwards. When we know the woman

to be pregnant can we always tell whether the signs of trouble are those of uterine congestion or the tokens of threatened abortion? we must answer in the negative for in the early months and at the commencement of the trouble it is impossible to tell. But fortunately for all parties it makes very little difference about the diagnosis for the treatment is the same in both cases (that which is good in one is good in the other) in either of these cases rest in a large well ventilated room, in a horizontal position on a hair mattress with sponge and the douche at hand (to be used with discretion) these are among the most successful remedies known of in treating these cases. Hot towels applied to the external genitals are highly lauded by some writers, but this must be used with the

above treatment. Now if our treatment may we have allayed all the attendant symptoms of congestion, can we tell the woman she is out of danger? By no means for we do not know how far the congestion had gone, whether we have arrested it in time to prevent the rupture of important blood-vessels and an effusion between the uterus and placenta sufficient to destroy the life of the foetus immediately, even suppose the child to be alive we cannot tell how far the separation has gone between the placenta and uterus, nor can we tell how great the effect of such separation will be on the foetus. it may be that a part of the placenta may be separated from its attachment and by this means a portion of the child's nutrition and respiration is destroyed and the child suffers as does

the consumptive when the lungs are nearly destroyed, and as we see the child may live on for some time but sooner or later pines away and dies. During this time we have no symptoms to let us know the unlooked for death and consequently abortion is coming, now comes the question can we arrest, or prevent abortion when it has begun pain? it is thought to have been arrested, when it had pains set in, we are to go on the hope that by proper means it may be prevented. But if the pains are severe and seem to extend from the umbilicus to the coccyx with a considerable amount of blood lost and the neck softened and the membranes protruding our prognosis is unfavorable. However abortion is not inevitable unless the foetus is dead or the

separation of the connecting vessels so disturbed that they cannot support respiration. We can estimate the injury in a measure in this way by the loss of blood not by its quantity so much as by the time and manner in which it escapes. For instance if it is a slow dribbling or exudation for a long time it shows the rupture is slight and not dangerous but on the other hand if there is a large amount lost in a short time the separation is great and the abortion sure. As we have said when a woman has received an injury and suffers at first; and all at once, the symptoms all cease, and the woman is remarkably free from all the annoying signs of pregnancy, there is reason to fear miscarriage. We have said the diagnosis in

the early months of gestation was very uncertain, but in the 5th month much more certain for reasons already mentioned, and at this time if the foetus dies these are some of the symptoms, the breasts waste away, the abdomen gets smaller, there is a dragging weight in the hypogastrium and if the movement of the foetus had been distinct and now become imperceptible, and lastly if the sounds of the foetal heart cannot be heard after the fifth month the child may be considered dead, unfortunately this last cannot be a symptom earlier than the fourth month. The prognosis now comes. This is not so difficult as the diagnosis, but it is variable according to the time ~~of~~ of its occurrence and the cause producing it. As to the child it is always

fatal to it for the expulsion [illegible] before it can support an extra uterine life or else it would not be properly abortion. It has been said by authors that children have lived when expelled as early as the third or fourth month but these are too rare to affect the [illegible]. As to the mother it is considered more grave than at full term, but it is not its immediate danger, it is later that its most serious trouble sets in. But the consequences at the time are certainly less serious than at full term, we find acute diseases attack lying-in women while chronic diseases attack the genital organs of those which have frequently aborted. Another evil is when a woman has had one miscarriage she is very much more predisposed to a similar one than

other women and hence great precaution should be exercised to prevent it. The period at which this accident happens modifies its effect, as we have seen it is but trifling, appearantly when it happens very early (within the first or second month.) Authors differ as to the stage at which the abortion does the greatest mischief. Mr. Desormeaux thinks the latter months of abortion are the most hurtful, While Cazeaux thinks the third or fourth month or the middle of the period at which the accident is considered abortion. Lastly the cause of the accident has something to do with the nature of the abortion, thus the most serious of all abortions are those speedily produced by the administration of drugs or by manipulations

If not produced by slow gradual causes are not so dangerous generally. But when it occurs during an attack of acute inflamation of an important organ, or during the existance of acute skin diseases it is very dangerous.

Respectfully submitted
By D. Edwin Stone
of Maryland

Not in Cat 1864 ?

An
Inaugural Dissertation
On
The Treatment of Gangrene with
Bromine

Submitted
To the examination
Of The

Provosts Regents & Faculty of Physic
Of the
University of Maryland
For the Degree of Doctor Medicine
By
Henry Robert Watts
of Baltimore

Treatment of Sanguine with Tyramine

Indeed there has been of late such great improvements in Medical Science that there is scarcely anything left to be discovered and we may almost say with confidence that our art is perfect or more strictly speaking as near so as it perhaps will ever become.

We all know when the hand of the Death Angel is once laid upon us bidding us prepare for our journey to eternal life; that all drugs or Medical Aid in the world can be of no avail

We can trace with strict coincidence

the progress and improvements of the Healing with the advancement of the other arts of life and with a gradual progress of knowledge on all subjects intimately connected with our existence or welfare

In considering the present subject I can not enter into full details but am compelled to confine myself to a brief sketch, both from the want of time and copiousness of the subject.

Having in the last year seen more than one Hundred and fifty cases of Gangrene treated I can with a clear conscience say that Bromine is the only medicine which produced the best satisfactory results

During the Seige of Vicksburg

last summer which lasted one or two months. the wounded were as early as possible conveyed to Memphis; in a short time the Hospitals became successively crowded immediately after Gangrene appeared; at first in isolated cases but soon made horrible invasions; a gangrene Hospital was immediately established to which I was assigned.

The gangrenous cases from all surrounding Hospitals were then collected.

The cases were treated with all of the known remedies; some with nitric acid; others with chloride of Sodium (Sol. aquea &c.) others again with creasote but none giving us the least satisfactory success.

Dr. Cleaveland a.a. Surgeon U.S.A at this time being in charge, Dr. Hicks Surgeon U.S.V. came by order of Surgeon General Hammond to introduce Bromine in the treatment of Gangrene

I closely watched the effects of this remedy, new in this disease,

Dr. Hicks became so confidential in the power of Bromine that he inoculated himself with the poison of a subject that had recently died with Gangrene; he applied Bromine immediatly and strange to say escaped unhurt having the least bad symptoms whatever.

During the first week from the opening of the Hospital having used

nitric we lost only fifteen cases
but during the second although
our number had increased greatly;
having used Bromine universally; we
lost but two.

The following is the manner
in which it was usually applied;
in the first place remove with a
forceps and Scissors all sloughs as
close down to the healthy or sound tissues
as sensation will permit; thoroughly
cleanse the parts with warm water
then with dry lint remove all moisture
which if neglected will prevent the
Bromine from coming in actual
contact with the diseased parts,
the Bromine may then be applied

by means of a small piece of lint in the form of a swab being careful to introduce it into all cavities and should pimples exist it must be injected with a syringe.

The application is to be renewed every three days using the pure Bromine; after the application the parts are to be enveloped in oiled silk to prevent the vapours of the Bromine from escaping.

The parts should be dressed daily with simple dressing during the intervals of application.

Sylvester Jones aged 25 years private Co. E. 7th Iowa Infantry Regiment volunteers was admitted in Hospl

suffering with Idiopathic Gangrene.

The disease commenced upon the dorsal surface of both great toes in the form of a black circular spot and spread with greater rapidity in the left than the right: in less than four days it had extended in the left above the ankle joint the Surgeon attending the case at this time stated to me that he found everything useless in impeding its progress. I suggested a trial of Bromine which was immediately used: on the second day after the application a line of demarkation formed about an inch and a half above the Malleoli.

The Surgeon attending being called to duty in another department

I at this time took charge of his ward.
The application of Bromine was continued
and the sloughs now became easily
detached; healthy granulations began
to spring up. The gangrene had extended
so far that the phalanges became detached
in a mass from the foot. the tarsal
and Metatarsal bones were entirely exposed
The Gangrene having now disappeared
we decided to amputate the left
leg which was performed at the middle
third. The disease in the right foot
was checked before extending as
far as we removed a portion of the foot performing
Chopart's with a slight modification
removing the foot at the tarso-Metatarsal
articulation. The patient is now

well ; although his symptoms were of the most unpromising character.

About three days afte the second operation secondary hemorrhage set in ; eight ounces of blood was lost before the bleeding was discovered by the nurse as soon as informed I immediately removed the sutures opened the flaps which was healing finely by the first intention a small branch of the internal plantar was bleeding which I ligated. This brought the flaps together with a couple of sutures and adhesive straps.

The next day the pulse became 120 with hot dry skin and high febrile symptoms which was controlled with Veratrum Viride in two days all

bad symptoms disappeared and from
this date he improved gradually to recovery.
It is hardly necessary to say that stimulants
and tonics were of the most importance
throughout. he having used two quarts of
beer every twenty-four hours.

Milk Punch; egg-
nog; ale or Beef tea are indispensable
in the treatment of gangrene

John Gabrick 26 Illinois
Regiment with amputation of left
foot had been in the same ward
with above case: the same nurse dressing
both cases; the stump had entirely healed
by granulation with the exception
a small surface about the size
of a quarter. A thin semicircle

about six inches through its widest portion suddenly formed accompanied by diminished sensation in the surrounding parts; slight constitutional symptoms had preceded but became now greatly increased.

Bromine was immediately applied which gave great pain in the application on account of being applied so early for sensation had not entirely been destroyed; the gangrene was instantly arrested having lost nothing but the cuticle.

We can see from this case that the earlier the remedy is applied the more powerful is the effect in

arresting the disease and it will also leave less loss of tissue

In every case where an opportunity has been afforded to apply this remedy before extensive destruction takes place amputation has always been prevented; which I can not say of any other known remedy although I have seen all treatment have a fair trial which has ever been recommended in this disease.

Surfaces after the Gangrene has disappeared often become stubborn, indolent; and indisposed to heal Bromine largely diluted is an excellent stimulant and should

to applied in this form it is
also of great benefit in all indolent
ulcers but is a most powerful
agent in Syphilis Dr. Pickes uses
no other Local application. It destroys
the virus of the chancre and
acts as a stimulant to the
indolent surface producing a
healthy ulcer when applied in
Syphilitic chancre it is used
in its pure undiluted state

An

Inaugural Dissertation -

on

Menstruation.

Respectfully submitted to the examination

of the

Provost, Regents and Faculty,

of the

University of Maryland,

for the degree of

Doctor in Medicine; -

by

Louis A. Monmonier. M. D. 1864.

To Drs. Butler and Chew, —

My worthy Preceptors —

as a small tribute of gratitude,

for their untiring efforts in

my behalf; —

the following lines

are most respectfully

inscribed

by the

Author

Introduction

In choosing a subject, upon which to write a thesis, the mind of the student naturally seeks for one which has reference to desease; for he is apt to think, that all branches of medicine which relate to the human subject should be pathological. Although we must admit that the study of desease is absolutely necessary for a physician, nevertheless if he is not well versed in physiology, it is utterly impossible for him to study pathology. It is absurd for one to attempt to study the conditions and phenomena of the human subject in a state of desease, unless he is familiar with them in a state of health.

Therefore after a long deliberation, with myself concerning a subject for thesis, I have selected one which is purely physiological, and one which I

consider deserving of the attention of every member of the profession. I do not expect to advance any new theories upon it, but merely to give the opinions of various eminent writers, to compare them, and to notice in particular the new doctrines which have of late years come to light upon the subject.

It is not to be expected that one who is just verging into manhood should express opinions, whilst he has those of men renowned for learning, and whose lives have been given entirely to study, before him. As for myself I will repeat with the Latin poet;— "Sit mihi fas audita, loqui". But still I must hope for the best, and trust to your kind indulgence for any imperfections that may be observed.

Menstruation.

Menstruation, from "mensis," a month, and, "fluo," to flow or to rush, signifies a periodical discharge of a

sanguineous matter, from the genital parts of the human female. It is a natural function peculiar to all women, and existing during the child-bearing period of life. It is known by the several names of Catamenial, menses, menstrual flux, courses, monthly periods, flowers, times, terms, reds, troubles, purifications &c.

Concerning the matter of which the discharge consists. John Hunter says. "It is neither similar to blood taken from a vein of the same person, nor to that which is extravasated, by accident, from any other part of the body; — but it is a species of blood, changed, separated or thrown off from the common mass, by an action of the vessels of the Uterus, similar to that of secretion; — by which action the blood loses the principle of coagulation." It has been well ascertained, that the secretion

of the uterus, during the inter-menstrual periods, as well as at these periods, has an alkaline reaction;— and also that of the vagina, has a decided acid tendency. Previous to the true menstrual discharge, which proceeds from the uterine cavity, as will be hereafter seen, becomes mingled with the vaginal mucosities, by chemical action, its principle of coagulation is destroyed. From this we see that its non-coagulability cannot be ascribed to absence of fibrine, as some have asserted. Further, it is true blood, similar to other blood in the body.

The source, from which the menstrual flow proceeds, is now generally admitted to be the mucous membrane lining the walls of the uterus. This mucous membrane is covered with cylindrical or dentated epithelium, with very small prolongations waving over the surface, like blades of grass in a field:-

between and beneath these, we find the membrane perforated by a number of minute orifices, which communicate with the nutrient glands within. Together with these we have innumerable little intricate blood-vessels, capillary in character, woven as it were and running in all directions around the glands. They are easily perceptible when injected. It is from these that the discharge takes place. If during menstruation, the uterus be examined, by speculum, the blood may be seen to oze from its walls drop by drop.

The time of life at which the discharge first occurs, varies from many circumstances;— chiefly, however, from those of climate and peculiarity of constitution. In warm climates it occurs earlier, than in those of a colder latitude. In our own climate, the menses occur between the twelfth and sixteenth year. The mean date of commencement is about fourteen and

a half years. In the more southern and northern temperatures the first appearance is said to vary between the ages of nine and nineteen. I think however these extremes are too broad. Cases of children, even of infants, menstruating, have been recorded; but these must be looked upon as abnormal, and as not constituting the true physiological function. Jews are said to have no catamenial, until very late in life, some even after having borne children. These too, should be considered as abnormal:— for they as such in truth.

The time of the first occurrence of the menses is called puberty:— from "pubertas," hair. Puberty is that state of human existence, at which the genital organs of both sexes become matured. In the human female the assent at this state is marked by certain physical and moral conditions or phenomena, some of which I shall proceed to notice.

In the first place, the cellular tissue situated over the symphysis pubis becomes increased, so as to form a prominence, the "mons veneris," which is covered externally with hair. The pelvis no longer presents that general organization, which till this period had progressed alike in both sexes, but becomes expanded. Her breasts are developed. The cellular tissue extends from the front of the breasts, as from two centres, towards the neck and hypochondriac regions; whilst it proceeds to form a soft cushion for the upper extremities. "Pectus praeceptis format amicis." The nipple projects and becomes turgescent; — the areola which surrounds it takes a darker hue. — Her form becomes more rounded and compact. — Her voice alters, but to take a softer and more melodious tone — Her eyes, which are at the same time brilliant and languishing,

expires mingled fears and tenderness. She experiences desires, which is a faint expression of the development of certain senses, which she cannot yet comprehend. These sensations fly from her mind, and give her a taste for solitude and music. She feels that some great change is taking place within. She no longer dares to approach the companions of her childhood, but with a downcast glance, and modest appearance:— those with whom but yesterday she shared all the pleasures of boisterous girlhood— She assumes a gentle modesty, which animates her countenance, and the seductive graces of her demeanor soon disclose that she possesses a power, which she never suspected. This is truely the springtide of nature, and the season of pleasure. Now she is an altered being. The hours of childhood have fled,—

she has passed the bridge from girlhood to the marriageable state:— in one word, she is a woman.

Whilst this great revolution is taking place in the moral character of the young girl, a change no less great occurs physically, within the genital organs.

The ovaries hitherto small, become enlarged. The Graafian vesicles which had during the early part of her existence, remained as it were dormant, now become developed, and more highly vitalized. Previously deeply imbedded in the tissue of the ovary,— small and rudimentary,— as puberty approached, some began to enlarge and approach the surface,— usually from fifteen to twenty in number. One particular vesicle is fully developed. Its walls become weaker and weaker, and its distention increases, until finally it bursts and the ovule escaping is taken up by the fimbriated extremity of the fallopian tube, to be carried

to the uterus. All these changes occuring within the ovary seem to cause sympathy between these organs and the uterus. They become congested:- a tide of blood sets in towards them. The uterus in particular has a direct sympathy with the ovaries. The cervix and mucous membrane become of a deep red hue. The Fallopian tubes also secrete an extra amount of blood. At this time the girl complains of lassitude, a feeling of tension and swelling in the hypogastrium. The breasts become painfully enlarged. She experiences more or less pain in the lumbar region, a sensation of heat, itching and tumefaction in the genital parts. In some cases the sexual excitement produces a general reaction; and nervousness, sometimes even to hysteria, exists. In others epistaxis, and hemorrhage from the gums occur. These symptoms last from two to eight days, during which time a flow of mucous at first

appears, which afterwards becomes streaked with blood. This hemorrhage continues for several days, when the amount of blood begins to diminish, and is mingled with the vaginal mucosities. It becomes less colored, until finally it assumes the character of the vaginal secretion. Thus occurs the catamenia for the first time. The subsequent retusses are of course not marked by such prominent symptoms, as this first. Nevertheless there are certain phenomena which indicate the time when the reoccurrence takes place. For instance, some women complain of headache, and are troubled with a peevish nervousness. There is also a very peculiar expression of the eye at this time, and a dark line beneath it. Epistaxis and bleeding from the gums occasionally occur, as regularly as the menstrual flow itself.

In some of the lower animals, their arrival at the age capable of reproduction is marked by some

peculiarities, which I think worthy of attention. In some birds the plumage at this period assumes more brilliant and varied colors. In the common fowl, the crest or comb enlarges and becomes vascular: in the [illegible] deer, which during the first year is mottled with what becomes in the second of a uniform and tawny or reddish hue. In nearly all species the limbs become compact, and the body rounded, and the whole external appearance is so altered as to indicate that the animal has arrived at puberty and is capable of reproduction.

It is well known, that there exists a sort of similitude between all animals, and so, although the function of menstruating belongs to the human female alone, nevertheless there is a similar occurrence, which takes place in the lower animals, at certain stated periods. The estruation, rut or heat, is said to be

owing to the periodical maturation of ovules, and is attended with great sexual desire, in fact it is the only time the female will receive the male. In some species of them we find a colored mucous escapes from the vulva on the approach of the season for copulation, but it would be unreasonable to compare this phenomenon with a function like the Catamenia.

The periodicity, or recurrence of the menses every twenty-eight days, or once in each lunar month, next claims attention. There can be no reason assigned for its recurring once a month, any more than if it should happen once in two or three months, or once in a year, as in some animals the rut does. We might as well ask why the birds build their nests in spring, or why some flowers bloom once a month, or why the trees put out their foliage in the spring, rather than in the fall. The all-powerful hand of the great

Sovereign Ruler ordained that it should be so, and we must look upon it as one of the many mysteries of nature, not intended to be penetrated by man.

"Design what e'er we will
There is a fate which overrules us still."

Some have attributed it to lunar influence, among whom Aristotle, Van Helmont, Mead and Rousseau are the most prominent. It is also a settled general opinion among the lower classes at the present day. To show the absurdity of this opinion, we have but to remember that the same woman may be regular at different phases of the moon, once in the space of seven, or even once in a year. There is not a day, but upon which some woman is in the beginning, middle or end of term. To make any rules for this subject, numerous researches and observations are needed.

There is one point in intimate connection

with any subject, and one of great importance, upon which I have said nothing:— the cause of the catamenia

For more than twenty centuries past, there has been a constant inquiry and search among the most learned physiologists as well as pathologists. as to the cause of regular menstruation in women. There is no wonder that such an anxious curiosity should have existed upon the performance of an office which gives health, beauty and perfection to the female, and in fact raises her to the exalted station of a woman. It is reasonable to anticipate that a great diversity of opinion should exist upon a subject of so much physiological importance to those investigate the principles of natural science. And such is really the case, even in our own enlightened age, there seems to

be a want of unity of sentiment upon it. Like in any subject connected with science, there are some self-opinionated men, who will always persist in making a track for themselves, in preference to following in the well-beaten path of true experience; although at the same time they may be fully convinced of the error of their ways. In this age the people are too easily deceived and, have been duped into false theories by unprincipled charlatans, who, wherever they may chance to exist, will always find ignorant and base persons to uphold their false & abominable doctrines. But to return;- the true doctrine in regard to the cause of menstruation has, I believe, at length, been reached after so many years of inquiry.

Some still adhere to the theory which was held by Hunter, Astruc, and M. Sabatier that the menses depends entirely upon a general or local plethora

or a superabundance of blood. This may be so to a certain extent, but there must be some cause for this plethora or superabundance of blood, with which, if those men had been acquainted, would have made their doctrine more plausible. They ascribe the flow to causes which are the sensible effects of the true cause, as will be shown hereafter. Others uphold Osiander whose theory was that the discharge is caused by too great a proportion of carbon and azote being contained in the blood of the womb. Dr. Clifton refers it to the relative weakness of the venous parietes and the perpendicular effort of blood. Paracelsus Sylvius and De Graaf owe it to a principle of fermentation. Whilst Stahl and M. Dugès, to the influence of an irretamentum. Emmet and Lecat say it is the effect of venerial desire. These, together with as many more doctrines, have been advanced at different times

by various eminent physiologists. The fallacy of some, and the absurdity of others is perfectly obvious, although we must give them credit for their laborious attempts to investigate a subject of such interest.

Within the last ten years the catamenial function seems to have been pretty well elucidated by the untiring labor of numerous physiologists. To Pouchet are we indebted for having first brought to light the great doctrine of "Spontaneous Ovulation," as an invariable law of all female mammifera. By his experiments and researches, we are enabled to prove in a satisfactory manner, that menstruation is intimately connected with the evolution and discharge of the matured ova, which takes place in the virgin, as well as in the married. Dalton in his treatise on Physiology says, with much truth, that. "The menstrual flow is an external sign and accompaniment of a more

important process taking place within. In the case of animals, there can be no doubt, from numerous experiments, that the extirpation of the ovaries causes the disappearance forever of all symptoms of heat. Analogy, therefore would lead us to suppose that the menses would cease in the human female after castration." The most rational theory therefore, from all the sources within our reach is that the spontaneous evolution of a Graafian vesicle and its subsequent rupture, at stated periods of twenty eight days, or thereabouts, causes a local plethora and general congestion of the uterine organs, and consequently a tide of blood proceeds to the organs, and from the increased vascularization in the neighboring parts, the blood oozes from the mucous membrane of the uterus by a kind of cappillary hemorrhage, similar to hæmoptosis. Therefore there exists a decided connection between all the

organs which constitute the female sexual apparatus. Ovaries, Fallopian tubes, Uterus and external parts even to the breasts. Again, when we speak of menstruation it should not be connected with the uterus alone, as was formerly the case, but with the utero-ovarian phenomena conjointly; for as has been stated before the discharge is merely an external and visible expression of a more important act taking place within.

At what period during the catamenial flow, does the rupture of the Graafian vesicle occur? This like the major part of our subject has long been a point for controversy among searchers for the truth. Although it has not the importance attached to it, which the cause of menstruation has; - but still it should prove interesting to those who like to be acquainted with the minute particulars of things.

Pouchet maintains that the rupture of the Graafian vesicle and evolution of the ovule takes place either at the epoch when the menses cease, or one or two days later. With him agree Bischoff and Raciborski. If this be true the progressive vascularization of the vesicle coincides with and occasions the uterine congestion and consequently the menstrual flow which proves the assertion made above. On the other hand M. Costé claims, to have ascertained from observation, that the rupture occurs sometime in the early part of the epoch. The truth, however seems to rest between the two authorities, for it may occur at any time during the discharge. We know it must happen at some time in connection with the catamenia, as it constitutes the most important part, as well as the primary cause of it.

We have said the menses recurs every

twenty-eight days. There are various opinions concerning the recurrence of the menses. Some assert that all women menstruate regularly within the first fortnight of the month, half from the first to the eighth, the remainder from the eighth to the fifteenth. This is absolutely absurd, for it is a well-known fact that women are menstruating every day, in some part of the world. To this rule of regular recurrence every twenty-eight days, like all other rules there are some exceptions. It is said that with some women only twenty-two twenty, eighteen and even fifteen days elapse between their courses, nevertheless they are regular. Where these frequent returns of the catamenial happen we generally find the climate warm, and the woman to be of a nervous and irritable temperament. It is also very common for prostitutes and those who indulge in sexual intercourse to excess, to have their courses more

frequent than natural. Although they may be regular.

These again are regular every thirty-second, thirty-fifth or fortieth day and even two or three months.

These cases are frequently observed in Greenland, Lapland and other countries of a northern latitude, and also in females of a nervous tendency.

If during, or immediately after the flow of the menses, the woman should have a fruitful coitus with a male, at the next regular period she will be surprised to find not return of the courses; and this retention will continue during pregnancy and lactation; - constituting one of the principal diagnostic signs of this state. But this rule is not invariable for the menses have been known to continue throughout pregnancy. These cases are however very rare.

The diseases of menstruation are:- Amenorrhea, or suppression of the menses. Dysmenorrhea or painful

Menstruation. Menorrhagia, excessive flow of the menses.

These disorders generally proceed from some disease of the ovaries, or the neck of the womb, seldom from the body, and exert a greater or less influence upon the general health of the female, frequently causing hysteria and sometimes even epilepsy. I will speak no further of the diseases of Menstruation, as they do not properly come under my subject considering it physiologically.

As to the quantity of blood discharged at each menstrual epoch:- it is variable, even in the same woman, and it is difficult in any one case, to estimate the exact quantity which escapes. The ancient theory of Hippocrates, which sets the amount at eighteen ounces, is well known to be an evident exaggeration; for the loss of so great a quantity of blood every month, would very soon reduce the strongest

of the woman beyond possibility.

Women of a full plethoric and sanguiferous temperament should, and do loose more blood, than those of a weak and anaemic constitution. Cazeaux speaking of this point remarks. "The quantity discharged is no doubt influenced by the diet, habits of life, and climate; it is greater in the rich and indolent than in the poor and industrious. It is said that women from the country, who become domestics in Paris soon find their courses to diminish, and sometimes even to cease entirely."

There is not the same amount of discharge throughout the duration of the menstrual epoch. It flows moderately on the first and second days, increases on the fourth and fifth, and again diminishes on the sixth and seventh. Moral emotions and defective digestion, and above all the influence of

cold may have an effect to determine its momentary or even final suppression. The latter, the effect of cold, is often resorted to by females, who wish to indulge in worldly amusements, balls, parties, &c. which they have their courses on. But the remedy too often proves detrimental, by not only causing a partial but complete suppression.

After having, ~~xxxx~~ considered, the causes, the source, the recurrence, together with the other phenomena of Menstruation, the subject would not be completed, were it to omit noticing the final cessation. There is no invariable rule with regard to the time, however we are enabled to come near it. It is generally admitted to be about forty-five years. Some women, nevertheless cease to menstruate at forty, thirty-five, and even as soon as thirty years. On the other extreme

some women to cease their regular monthly visits without the slightest difficulty until from fifty to seventy years. Whilst others again are said to have lost them at the usual time and to have become regular once more after the lapse of ten, fifteen or even twenty years. These cases of return of the menses after their final cessation, are to be looked upon, rather as a sign of some latent disease generally, than as a real resumption of the function. Perhaps it may be a last effort of nature, to restore to her another springtime, in her now forlorn existence, but which effort so frequently hastens the final dissolution.

From actual observation it appears, that in warm climates, the menses cease at from thirty-five to forty years. In the more moderate temperatures between forty-five and fifty; whilst

in the more northern latitudes they cease from forty-five to fifty years. Thus it will be seen that the menstrual function, and consequently the period of reproduction in the human female, last generally between twenty five and thirty years. Where the appearance is precocious they cease sooner, and when it is tardy, they are prolonged to a later period of life.

That time in life at which the menses cease is very properly called the critical time or critical age. The final cessation of the courses and consequently of the spontaneous ovulation produces in the generative organs and in the entire organism of the woman, effects directly opposite to those which the first appearance had occasioned. The change of life is noticed by the gradual recession of those charms which marked the puberic age. The breasts become flaccid, the face wrinkles and loses its

delicateness of structure. The cheeks no longer possess the beautiful maiden blush, which adorns the young woman, but assumes a yellowish tint. The ovaries collapse and wither away, until they are almost imperceptible. The Graafian vesicles no longer continue to perform their evolutions, but become fallen members of the common mass of decay. The uterus seems to be struck by the same blow which destroyed the ovarian organism, for it too follows in the general waste, and becomes as it were foreign to the existence of the body.

The woman has now indeed, lost all her charms, — the season of pleasure has passed. — She has no longer any of the attractions peculiar to her sex. She must fall into the ranks of those good superannuated creatures, who have performed all the duties of their destiny, and patiently wait to be summoned from this world of pleasure, which no longer presents for

for her any enjoyment.

The dangers attending the change of life, have no doubt been greatly exaggerated. It is a pretty general opinion that more women die at this period than at any other time in life. But reference to well-authenticated statistics show that the number of women who succumb at this period is not greater than the number of men. Neither is there a greater number of women who die between forty and fifty years than at any other period of life. Although if the menstrual flow should suddenly cease, it would be apt to create some disorder, or perhaps excite some latent disease. The cessation is generally preceded by precursory symptoms, such as a gradual diminution of the time between each epoch and also of the quantity of blood discharged. Sometimes they cease, return again to cease, and return, before

they end finally. The discharge becomes irregular, a mucous epithelial matter exudes from the vulva; nervous complaints, irritability of the stomach, and even severe disease occurs in some cases; whilst in others nothing of this kind happens at all, and the health which had been hitherto precarious, becomes now quite confirmed:- The emaciated individual grows stout and finds nought but benefits from the cessation of the discharge. Thus does the same cause which gave beauty to youth, but its commencement, give health to age by its ending.

I have now finished.- But I feel confident that I have far from done justice to my subject; nevertheless I trust my imperfections have been overlooked with an indulgent eye. And now allow me to avail myself of this occa-

sion to express my most sincere thanks to the professors of the "University of Maryland, as well as to my preceptor, Drs. Butler & Thew, for the many kind attentions I have received at their hands, and I now assure them, that I will ever remember my "Alma Mater", and her respected professors. The many happy hours I have spent within these time-honored walls, and in the Baltimore Infirmary, I will always look back upon with pleasure, and they shall ever be cherished among the most happy reminiscences of my life.

Farewell,

Louis A Monmonier.

Baltimore Infirmary Jan. 5 1884

An

Inaugural Dissertation

On

"Phthisis Pulmonalis"

Submitted to the Examination

of the

Provost, Regents, & Faculty,

& Physic of the

University of Maryland.

For the degree of —

"Doctor of Medicine"

by

Joseph F. Shaw,

Maryland.

1864.

I most respectfully
Dedicate,
the subjoined Thesis,
to
Prof. H. B. Smith. D. D.

1864.

Phthisis Pulmonalis,

The term Phthisis, is derived from the Greek "Φθιω," and Consumption, from the Latin, "Consumptio, Consumor," which signify to waste or decay, and was introduced into Medicine, when there existed little precise knowledge of the morbid condition upon which the emaciation and other characteristic symptoms of the disease depended.

It was first used as a generic term, to signify Consumption of every kind, and was afterwards more distinctly specified according to the organ in which it was supposed to originate as — "Phthisis — Pulmonalis" - Phthisis - hepatica" -

"phthisis mesenterica" &c — But as the Knowledge of Morbid Anatomy became more precise, disease of the Lungs was found to be more frequently connected with Consumption: and hence Phthisis Pulmonalis, not only attracted greater attention than any other form of the disease, but a large proportion of the other species were found to resolve themselves into this, having been discovered to be mere complications of it. —

In my thesis, I shall denominate Consumption Phthisis Pulmonalis, as being the most appropriate name for that — "terrible insatiable tyrant"! whose terrific progress none can arrest

nor has mortal man the power, to count the mighty number of thy victims! why like an "untimely frost" dost thou almost exclusively breathe thy withering blasts upon the "fairest and loveliest of our species"? – why select blooming and beautiful youth instead of haggard and exhausted age? thou fell destroyer of man! – When it is remembered that nearly half of the human family die from the various kinds of this disease, it will be seen to be of vast importance, duly to consider its symptoms, and to study its best remedies. Upon a careful examination, the lungs will be found to be full of little perforations or holes, like a sponge – These holes

are cells, into which the air enters when we are in health. So great is their number, that they have been calculated to amount to one hundred and twenty four millions, forming a surface thirty times greater than that of the human body. Each of these cells, is provided with a net-work of vessels, by means of which the blood is brought into immediate contact with the air over every portion of their surface. When this great amount is taken into consideration, we must feel how necessary it is, to supply pure air to the lungs, with every breath we draw, as well as to guard them from great and sudden colds, which are usually the forerunners

of phthisis; though it must be admitted that in some instances – there is a strong hereditary tendency to it, and that in others it results from dissipated habits. – These facts should surely induce caution! Tens of thousands of our most beautiful girls, lead themselves to this disease and to their graves – by wearing thin shoes, exciting amusements, tight-lacing, close rooms, and want of open air exercise. – With regard to the subject of preservation from consumption, or attacking it – in its incipient stages, Dr. W. Hall, has made some very sensible remarks, which I will quote – He says: "If you have actual consumption, or are merely threatened with it; or if from

Some of your relatives having died with it, you have unpleasant apprehensions of its lurking in your own body: or whether you a diseased liver, or a disordered Stomach, or a dyspeptic condition of the System, the foundations of this dreadful disease are being laid in your own persons; or whether by exposure, or by over bodily exertion or mental labor; or wasting cares for the present, or anxieties for the future, or by hugging sharp-pointed memories of the past, or by intemperate living in eating or drinking, or by unwise habits or practices in life — you have originated in your own person the ordinary precursors of Consumption — such as a hacking Cough, pains in the breast, chilliness, wasting of flesh & strength,

shortness of breath on Exercise — under all
these Circumstances a proper attention
to air and Exercise are indispensible
aids — are among the principal, essential
means of Cure, and are never to be dispensed
with: Confinement to the Regulated tem-
perature of a room in any latitude is
certain death, if persevered in; and if
from any Cause, this air and Exercise
are but practicable to the invalid, even
to a limited extent it is his misfortune —
he not being able to employ them does
not make them the less necessary, and
they have no substitutes" — It is a great
matter of importance to avoid extremes.
Thus our author further elucidates —
"You will never fail to find that whenever

you overdo yourself, in the way of exercise — Exertion must be adapted to the strength, and the rule is imperative under all circumstances — stop short of fatigue — This applies to mental as well as bodily operations." I will now speak of Phthisis, or Consumption proper — a subject teeming with such importance to science and humanity — that in comparison with it most others sink into utter insignificance. If we think for an instant — we will readily realize the truth of this observation — but letting our minds revert to the busy crowd hurrying along the great thoroughfare — or the quiet congregation assembled for devotion — one fourth are under the hand of this destroyer, destined,

if not rescued, to fill a consumptive grave!

With this astounding fact, daily and hourly before our eyes – we need add nothing to enforce – the importance of whatever promises to diminish this frightful mortality. This subject is exciting the most intense interest in every civilized part of the globe – hospitals for the special treatment of Consumption are being erected – and Royally endowed in Paris, Berlin, London, and St. Petersburg and everywhere we witness a growing confidence in the curability of this disease:

The great <u>evil</u>, which has hitherto existed, and still exists in the profession, is that there are no fixed principles regarding, either the treatment

of Consumption. — Physicians of equal reputation and experience, recommend at one and the same period of the disease, Medicines of the most opposite qualities; and each persists in a daily routine, the insufficiency of which, is sustained by all experience. — It may be safely said, that the most learned and experienced in the old routine have accomplished no more than temporary palliation; while the ignorant and inexperienced have often hastened the fatal termination — by their injudicious ministrations. — A "pregnant is the very name Consumption," with all that is terrible to the invalid — that few Physicians, impressed with the idea of its incurability —

have the moral courage to inform the patient of his danger while longer concealment is impossible. It is no unusual thing to hear it designated as a "severe cold" "a slight bronchitis" - Symptoms which indicate the inception of a fatal disease of the lungs. - And the very remedies employed, under a hundred different names, for the cure of cough, etc - if they have any effect at all - only mask the danger, by giving temporary relief: while the disease itself is becoming more deeply seated, and more certainly fatal in its issue. Thus the poor invalid is deceived to the verge of the grave - when becoming alarmed, and importunate for relief - he is advised to "visit the Country"

to "take a sea voyage," or to go to a warm climate for a season" — and thus his fears are once more allayed. — If he expectorates blood, it "only comes from the throat" — If it be winter "you will be better in the ensuing spring" — such are the comforts of the kind-hearted physician" — But, alas! too often, the "country" referred to, is that which lies beyond the tomb; and the "spring" the season that cometh not until "life's fitful fever is over."

— Diagnosis. —

Forms and varieties of

Phthsis &c.

The disease termed Phthisis Pulmonalis, is brought on by the formation of a particular matter called tubercle, in the tissue of

the lungs. I shall first endeavor to trace the progress of some of the changes which Morbid Anatomy, has shown tubercles to undergo in the progress of the disease, and afterwards inquire into their origin &c —

Amongst one of the earliest Symptoms of Consumption which attracts our attention is a Cough — It is dry, and first observed on the patients getting out of bed in the morning — After an interval, it is also experienced during the day — especially after exertion — and again at night after retiring — This Cough is so slight generally, as for the most part to be entirely overlooked by the patient, and may scarcely be regarded by his friends, being in reality little more than a few days back —

Perhaps after the lapse of a few weeks or months, the morning Cough, is observed to be attended by the expectoration of a clear, ropy fluid, like saliva, which is supposed by the patient to come from the throat. By degrees this comes to be continued with the Cough throughout the day - though much less than in the morning - Coughs sometimes prove unimportant for Coughs do not always end in Consumption; but nevertheless it is like to indicate the approach of serious mischief - A Cough is said to be not always present in confirmed Consumption; for occasionally a Case runs through all its stages, without there being any Cough, beyond a gulping kind of effort

in throwing up the matter – This however is very rare. I have never witnessed a case of this kind: but several cases with severe coughs have come under my own observation within the last two years – for the most part proving fatal – Often awhile, varying in different cases, little points of pale yellow, or greenish or grayish yellow matter are observed in the transparent mucus ~~Expectorated~~ – and about the same period specks and streaks of blood are occasionally seen – The transparent-expectoration becomes less, as the disease advances, whilst on the other hand, the opaque yellow matter is greatly increased, in quantity – There is very little uniformity

in the amount expectorated, in different cases, in the same stage of the disease — Occasionally the quantity is very small, even where there is extensive disorganization of the lungs — Whilst on the contrary the amount may be large from the commencement, steadily increasing until it exceeds a pint — in twenty-four hours. Many patients do not expectorate until very late in the disease and in fact, death ensues before the lungs break down — One of the early symptoms is shortness of breath, and it is observed in ascending stairs, walking up hill or in any active exertion — in which this sensation is accompanied with a feeling of tightness and perhaps a slight-

oppression in the chest. Towards the close of the disease, this constitutes, often, the principal distress of the patient — Many persons who experience this symptom, on being questioned with regard to it, will make a deep inspiration — and then forcibly strike the breast with the fist — remarking: "there is nought wrong here!" to which declaration the anticipated unqualified assent from the physician.

But unfortunately this is — no proof! Shortness of breath is generally much increased before hemorrhage, and relieved by the loss of blood — The number of respirations, in health varies, from fifteen to seventeen in a minute; but in this disease, it is no unusual thing

for them to increase to twenty five or thirty,
and that too, without exciting the attention
or alarm of the invalid. The pulse is usually
much increased in frequency & feebleness.—
There is a remarkable connection kept
up between the pulse and the number of res-
-pirations per minute. Each additional
respiration above the standard of health
will be found to raise the pulse about five
beats.— Those cases in which the pulse
is but little disturbed are more favorable
than those in which it ranges from one-
-hundred to one-hundred and twenty.
Pain in the chest usually does not
occur until late in the disease, and it
is said that the lungs have been known
to be broken down— and large ulcers or—

excavations formed, without the patient
even complaining of the least pain. Generally,
there is a sense of weight and apprehension;
some patients feel sharp pains below the
clavicle, beneath the scapula or in the sides.
In others there is a dull aching, or a sense
of burning in the same parts. The seat of
the pain is frequently distant from the
part affected. It is not unusual for
the pain to be experienced in the right lung
while the disease is confined to the left
or vice-versa. -

Hectic fever, is a symptom of great
moment. Where the fever is preceded
by a chill, it is often mistaken for a paroxysm
of ague and treated without leading to
a discovery of its connection with the disease

in the lungs. It creeps upon the patient insidiously, and increases by slow degrees. Towards evening he feels chilly, creeps up his shoulders, & turns his back to the fire. After he gets into bed his feet and hands are hot, and towards morning he perspires - at first slightly, but as the disease increases, so profusely, as to drench everything about the bed. Usually one in every ten weeps "night sweats" altogether. These sweats have a close connection with sleep. They rarely occur when the patient is awake - So distressing is this symptom, that many afflicted with it dread the return of night. The exhausting and rapid wasting away of flesh which occurs in the advanced stages of this disease are in a great degree due to

the debilitating effects of Night-Sweats.

The loosing of a little flesh is often one, of the earliest symptoms, wasting is the peculiar mark of this disease. It goes on though the appetite may be good, & the food abundant and nutritious, this, however is not the case invariably. Nor the disease but infrequently makes Considerable progress before the patient becomes visibly thinner - a result seen most Commonly in young women.

When a person without any apparent Cause becomes thin, and has, at the same time a quick pulse, and hurried breathing, you may almost Certainly conclude that there is mischief in the Chest though that Circumstance may never have been

suspected. The Menstrual function, is generally suppressed after the first few months of the disease. The destructive changes going on in the lungs seem to absorb all the energies of the system. Often the attention is not attracted to the lungs, until long after the menstrual functions have become suppressed. It is the unfrequent occurrence for strong Medicines to be prescribed by the careless Physician, to restore the Menses; and he only discovers the folly and cruelty of such a course, when the disease of the lungs becomes too manifest to be any longer mistaken. To cover his carelessness he then attributes the deposits of tubercles in the lungs to the disarrangement of menstruation.

while, in reality, this is but one of the common consequences of consumption. The circulation is always feeble in consumption - as is manifested by habitual coldness of the hands and feet. Another very common indication of this disease, is an appearance of blueness below the eyes, often observable before any other symptom excites attention.

Diagnosis.

With respect to the detection of tuberculous disease in the lungs, Dr. Watson says: it is sometimes very easy, sometimes extremely difficult. It is easy when the tubercles are numerous, large, and far advanced: difficult, sometimes, when they are crude, scanty in numbers, and thinly scattered, & individually small. In the latter case

they may not cause any appreciable deviation from the natural resonance of the chest on percussion, or from the natural smooth equable rustle of the breathing — By auscultation we are lead, with a very important view of pointing out their bearing upon the diagnosis. Many of the Symptoms tell their story so plainly that any attempt to Expound or Explain or interpret them would be Superfluous.

One or two Cardinal points, however I may just advert to - The fact that tubercles occupy the upper part of the lungs by preference, is of great importance in Relation to the diagnosis - When the Symptoms are equivocal; when, as far as they are concerned, the Case may be either one of -

bronchitis, or of tubercular consumption: a careful examination of the superior regions of the chest will often decide the mooted question. The sound resulting from the first gentle tap upon or beneath the Clavicle, often rings in the Physician's ear the knell of his unfortunate patient. Even unusual distinctness of the sound of expiration, if heard at the summit of the lung and a "furline" if at the summit of one lung only, warrants the terrible suspicion that tubercle, are breeding in that lung. Dr Watson further remarks: "It may indeed, be laid down as a rule, which is diversified with but few exceptions, that if you find dullness on percussion: or coarse or insufficient breathing; or a click or morbid noise of some sort when

the patient respires, or speaks, or coughs: if you find this day after day and always, between the Clavicle and the Mamma in front, or between the Clavicle and upper edge of the Scapula, over the top of the Shoulder, and nowhere else: and more especially if these deviations from the healthy Sounds be limited to one Side, or greater on one Side than the other, or different in quality on the two Sides: you may set the Case down as <u>tuberculous phthisis</u>. On the other hand, if in the same parts you still distinguish all the natural Sounds of the Respiration and can still obtain a clear Sound on percussion, pass and not to condemn the case, nor despair of Recovery, whatever

as other circumstances may be. The most symptoms certainly, when auscultatory signs are wanting is haemoptysis.

There are also many other symptoms among which the most prominent are diarrhoea & oedema, which are very ugly symptoms of Phthisis. Oedema of the ankles, and even swelling or puffiness of the hands and face, are circumstances which seldom fail to appear in pulmonary Consumption: but they are among the latest of the symptoms. The Catamenia are suspended in women: and the hair falls off. There are certain physical peculiarities too, which are strongly indicative of a tendency to Consumption; or rather to the scrofulous diathesis. Largeness of the pupils,

a sluggish iris – in other words, a not very sensible retina – constitutes one of these. A thickened or clubbed state of the ends of the fingers, with convex nail, forms another. Dr Watson says: This latter is not peculiar to tubercular consumption – He remarks I have heard of one case in which it was strongly marked, the patient died after a long illness – chronic purulent discharge from the pleura after paracentesis thoracis, but there were no tubercles.

Galloping Consumption

There is another form of consumption which gives a more speedy termination to the life of man, than any other – which is denominated galloping consumption, or acute phthisis –

Acute phthisis, is considered the second form of tubercular disease of the lungs of which I shall speak, - popularly so called from the fearful rapidity of its progress.

It is no unfrequent thing for persons in apparent good health to catch cold and die within six or eight weeks, from this form of phthisis - It almost always begins with a cold, which sets in with great violence, and from the first is felt to be deep within the chest. I have known two cases of this form of the disease, within the last few months - both of which proved fatal within a remarkably short space of time. There is usually some cough, fever, & night sweats from the beginning. There is also difficulty of breathing, and a great sense

of oppression on the chest. At the end of
a week, generally Expectoration commences,
but the matter discharged resembles more
that of a recent Cold than Consumption —
There are few Symptoms by which this
disease can be distinguished from a low
form of Inflammation of the Lungs, and
hence it is, that these diseases are often
mistaken for one another and maltreated.
There is, it is said, in fact, nothing about
this affection like common Consumption;
Yet it is called so, since an Examination of
the lungs after death — will show that the
whole internal surface of the air-tubes the
air cells — and even the substance of the lungs,
thickly studded with fine tubercles — Another
form of this disease occurs in young & delicate

persons: those having habitually cold feet and hands: who are strongly predisposed to Consumption, and who even in health, become weak and fatigued by every slight exertion. In such cases the destroyer steals silently upon his victim. The patient scarcely feels ill — there is but little cough, no pain, no spitting of blood, often no expectoration. As they were always short breathed and liable to colds, any cough that may exist is attributed to fresh cold. Gradually the countenance becomes pale, the lips of a bluish color, and the whole features sunken. Under these circumstances, without any increase in the cough or expectoration diarrhoea occurs, and after a few exhausting discharges, the patients may die, without a

struggle, falling up in a chair or in a fainting fit - From which friends, strive in vain to restore them!

Course of Phthisis. —

The ordinary course of phthisis is generally slow, from one to four years, often very much longer. However, it is sometimes very rapid in its course, terminating life in six or eight weeks - Such cases as end life in so brief a space of time are termed acute phthisis - They mostly consist of Miliary tubercules, deposited throughout the lung. - This sort of consumption (galloping consumption) is often masked by fever —

In this form of the disease it begins with — a shivering or a decided ague chill, followed by heat of the skin, quick pulse, and all the

indications of continued fever. Sometimes the fever abates and again returns in paroxysms, but this is rare. Not unfrequently it puts on the character of bilious fever, or catarrhal fever, for which disease it is often mistaken. Soon cough manifests itself, and is accompanied by quickened respiration. The cough is rapidly followed by expectoration, at first clear, soon becoming yellow, then taking a greenish color, and from time to time streaks of blood will be observed in the discharge. There is always considerable pain through the chest, the bowels are relaxed, and in more than half the cases there is exhausting diarrhoea, under which the strength rapidly vanishes, and the patient dies six or eight weeks from the beginning

of this illness. Though this is one of the forms of Galloping Consumption, and certainly it merits this name from its frightful rapidity of progress it is usually attended in the last week or ten days of its duration with all the worst Symptoms of Consumption of slower progress. The larynx, has been known to become ulcerated only a week before death, and yet make such rapid progress as to extend to, and eat through the epiglottis, rendering the poor sufferer unable to swallow liquids at all. -

Lesions after Death.

After death the coats of the bowels are found to be ulcerated, the coats of the stomach thickened and the liver in a most unhealthy state. In fact it may be said the whole

body becomes, in the short space of six weeks
a mass of decaying organs. —

Prognosis & Treatment.

Phthisis for the most part, unfortunately proves fatal, but this is by no means universally so, as cases have been known to be cured, from the fact of the lungs of persons after death, having been found to contain cicatrices, who have afterwards died of other diseases. The chances of cure depend upon the number of tubercles deposited, and upon the tendency of the constitution to deposit more. There is no, medicine, as yet, discovered, that has reached the disease, or caused it's removal - but the system is sometimes supported until Nature accomplishes a cure - and the tendency to

to further decline stayed. Hence the most important treatment is proper "hygenic" - Particular attention should be paid to Nutrition which should be invigorated up to the healthy standard but not beyond it. The food should be, Nutritious and easily digested, Stimulation as a general thing should be avoided, although, Sometimes a moderate use of wine & malt liquors are allowed. Exercise is of great importance, & horse back riding is said to be more beneficial than any other -

The patient should exercise in in open air as much as possible, not - avoiding cloudy weather providing he is properly clad - A residence in a warm dry climate especially in winter is said to be very desirable if

is also recommended that the invalid should
live in a house near, or in a Pine Forest -
Medicines found to be most useful are
tonics, if the digestion is impaired, particularly
- iron - iodine - and the cold infusion of
wild cherry bark; but Cod liver Oil - is
said to be the most important of all - and
generally gives relief after it has been
used five or eight weeks. The Oil is
generally used in the incipient stages, &
has often been found to give great relief
to the Sufferer - Thus have I, in my humble
manner - endeavored to point out some of
the many difficulties etc - that the Physician
has to encounter - in his arduous labors - in the
treatment of this disease - And I hope that
the many imperfections will be excused
by my respected Readers —

An

Inaugural Dissertation

On

Typhoid Fever

Submitted to the examination

of the

Provost Regents and Faculty of Physic

of the

University of Maryland;

for the degree

of

Doctor in Medicine,

By

Jno H. W. G. Woodon.

of

Queen Anne's County

Maryland.

1864.

Typhoid Fever.

This is a febrile affection, bearing a general resemblance to Typhus Fever, but marked particularly by the lesion of the Glands of the ileum, (Peyer's Glands) enlargement of the spleen, rose colored spots on the thorax and abdomen; and having also sudamina.

Symptoms— The disease sometimes begins by a chill succeeded by fever, though more commonly it comes on insidiously having prodromic symptoms. The patient is uncomfortable and complains of wea-

rinep, languor and general uneasiness, head ache on rising in the morning, dulnep of intellect, alternate feeling of heat and chilliness, slight acceleration of pulse, furred tongue, diarrhea, impaired appetite, & nervous system disordered. These symptoms may last for several days or even for a week without any very marked change except an aggravation or gradual increase of all the symptoms.
The disease at this time may be considered fairly established, presenting the ordinary phenomena of fever, as increased frequency of the pulse, ranging from

minute to a hundred in the minute, and in females as high as a hundred and twenty, but as a general rule does not exceed a hundred.

The flush in the face is of a purple tint, or more so than in other fevers and if not present at all, the complexion frequently presents a dusky hue, with marked dulness of expression. Head ache is almost always present notwithstanding how mild soever it may be. Pain in the back and limbs or a feeling of general soreness with restlessness and want of sleep are charac-

-teristic symptoms- Epistaxis gene-
ally occurs. The pulse now becomes
more frequent and weaker. The
tongue more deeply furred and
thicker, appearing red at the tip.
The stomach is irritable, diarhea
is a frequent accompaniment.
large, fluid evacuations consti-
tute diarhea, Pain in the abdomen
is produced by pressure- severer
in the right illiac region- Tym-
panitic abdomen- Often cough,
dry Rhonchus- and as the dis-
ease advances mucous Rhonchus
is not unfrequent.
The urine is sometimes scanty
and high colored, and not

unfrequently of an offensive character. Bronchitis is very often discovered as an existing complication. The aforenamed are the general symptoms up to the last of the first week, or the first of the second week of the disease, when others are superadded. The tongue becomes dry and brownish, deglutition difficult, abdomen decidedly tympanitic. The rose spots upon the abdomen may now be seen, and at the same time but generally several days later Sudamina may be detected upon the neck and upper part of the chest.

Stupor or delerium may now assume the place of mere headache - ringing or buzzing in the ears followed by hardness of hearing amounting even to deafness sometimes occur. The eyes are sometimes injected. The tongue is protruded with difficulty and is frequently observed to tremble.

As the disease advances a complete Typhus condition is arrived at. The tongue often becomes dry, gashed or sore also incrusted with brown or black coating. Dark sordes collect upon the teeth, gums and lips.

The pulse now generally becomes exceedingly feeble and frequent.

The surface or skin is usually hot and dry or it is either hot in some parts while it is cool in others and an offensive odour often exhales from the body.
Subsultus Tendinum and twitching of the muscles of the face is frequent, also a rigid contraction of other muscles may be observed.
The patient at this time is very feeble, lying on his back and involuntarily slips down in the bed. He may be seen to pick at the bed-clothes or even at imaginary objects; mutters or speaks incoherently or as is

Sometimes the case exhibits profound Coma.

There are other symptoms which occasionally occur, such as involuntary evacuations and retention of urine. The vitality of the skin is so feeble that sloughing of blistered surfaces occur, and gangrenous sores are observed over the sacrum or upon the hips.

When the case goes on to an unfavorable termination the pulse generally gives way, either being extremely frequent and fluttering or very slow.

The countenance assumes the

Hyppocratic aspect. The extremities become cool and clammy or as is sometimes the case the whole surface is in a clammy sweat. Hiccough may sometimes occur, when the fatal issue takes place. The patient seems almost to insensibly breathe his last, but in some cases the scene is preceeded by convulsions or at least painful struggles.

On the other hand, when the case is to end favorably, there is a marked difference in the symptoms. instead of the tongue being dry and coated it becomes moist and is observed to gradually begin to clean itself.

especially at the tip and around the edges, but in some cases from the centre or near the base.

The pulse instead of being exceedingly frequent and extremely weak becomes less frequent and decidedly fuller and stronger. The skin is not so dry, becoming relaxed and cooler. There is a subsidence of the delerium or stupor and the patient is more conscious of his surroundings. The distended or Tympanitic abdomen is seen gradually to disappear, and food is finally tolerated, in some cases even to avidity.

The duration of this disease is

generally protracted. Death may ensue as early as the last of the first week, but so early a termination is exceedingly rare; it more commonly occurs in the second or third week and sometimes much later, even as late as the sixth week.

In fatal cases the patient is seized with intense pains in the abdomen, with vomiting, having a small fluttering pulse. Syncope is not uncommon.- Extremities cold. The cause of these symptoms is the perforation of the intestine and escape of its contents into the cavity of the peritoneum setting

up inflammatory action.
It is said to occur more frequently in the mild forms of the disease than in the severe. Its occurrence is however almost always fatal. I have not seen in any of the books any reason assigned explaining the cause of ulceration or perforation occuring more frequently in the mild forms of the disease than in the more severe. I suppose that in the former form of the disease the some precaution is not used against the the actions of the patient - for in that form the patient may have sufficient strength to get

out of his bed to go to stool or to walk about his room which would necessarially increase the peristaltic motion of the intestines and thereby be productive of the mischief in question.

Anatomical characters— There is scarcely an organ of the body, that may not be the seat of some anatomical lesion, or in which signs of inflammation are not sometimes found after death. There are certain anatomical changes that are characteristic of Typhoid Fever— and which are considered by Dr Wood almost essential, and as familiar

to this disease as is the pustular eruption to small pox, and also a post mortem test of the existence of the disease such as thickening, softening and ulceration of the glands of Peyer; the condition varying with the progress of the disease. In the early stage of this disease the condition of Peyer's glands is not known - they have however been examined in all stages after the sixth day - their first appearance is that of a thickened condition and elevated above the surrounding mucous membrane with

clearly defined edges either smooth and regular or irregular and ragged in color They vary, some are dark red others are pale, while still again may present an intermediate hue, These patches are described as existing in two varieties. The hard and the soft- The latter of which is said always to ulcerate.

Enlargement, softening and ulceration of the mesenteric ganglia more especially Those corresponding with the morbid patches in the intestine and according to some writers,

ulceration of the solitary mucous follicles of the ilium. These ulcerated patches are not due to previous inflammation, but to the deposit of a peculiar dark matter from the blood, named tyhous or tyhoid matter beneath the mucous membrane so as to elevate the patches above the surrounding surface. The tendency of this matter is to soften; this causes the mucous coat to give way. In speaking of those patches they may vary in number there may be only a few affected or there may be quite

a number (Twenty or thirty, probably averaging from ten to fifteen. They do not all originate at once, but in general come successively, those near the illeo-caecal valve first appearing and afterwards those higher up, even into the Jejunum. The consequence of this successive appearance is a difference in degree of their development, the oldest being most advanced. Those that are situated highest in the intestine are sometimes but just visable, while the lowest

are in a state of ulceration.
Besides those mentioned.
There are ther lesions met
with, as ulceration of the
pharynx and epiglottis, (though
this is rare) softening of the
spleen, sometimes of the liver
and kidneys, hepatization of
the lungs, softening of the heart
and sometimes inflam-
mation of the meninges
of the brain with effusion.
The blood drawn in this
disease is generally defi-
cient in fibrin.
Causes — Nothing is definitely
known as to the cause of

Typhoid Fever. The circumstances of its production are said to be very diversified. It is often generated where a large number of persons are crowded together with insufficient or unwholesome food, and confined ~~in~~ vitiated air. Hence its appearance in prisons, badly ventilated hospitals, large & crowded cities, Camps and ships.

It may be inferred that the disease is produced by human effluvia or excretions in a state of decomposition - but it often originates in the pure country air, attacking all classes rich & poor.

In Country places it is very apt to prevail epidemically and confined to limited districts but more generally it exists endemically. Age is said to have a great influence over this predisposition, persons under the age of twenty five years are more liable to the disease than those over that age. It is comparatively rare in persons over thirty years of age, though it is stated that there have been cases up to the age of fifty, these however are exceedingly rare, Young adults, children and strangers

are most liable to the disease. It is most prevalent in fall and winter, though it may occur at any season.

Diagnosis - By the slowness and insidiousness of the attack; the diarrhoea at the beginning or soon after the attack; the dull or heavy expression of countenance; the dusky hue of the face; tendency epistaxis; cough and bronchial rales and after the seventh or ninth day the dryness of the tongue and general diminution of the secretions; the gurgling in the right iliac fossa; the hippocratic;

The rose-colored eruption; the Stupor and delerium and by the duration of the disease, and the peculiar musty or acid smell of the Skin.

Prognosis - This is a very grave disease. nevertheless no case should be considered as absolutely desperate or beyond recovery. It is only in articulo mortis where hope should be possibly lost.

The mildest cases cannot be looked upon as entirely free from danger - for there is no condition so low, no symptom so grave that death should be

Considered inevitable.

Among the most unfavorable symptoms are complete delerium, profound Coma, a notion on the part of the patient that nothing ails him, stertorous respiration abundant diarrhea or hemorrhage from the bowels, extreme febleness and great prostration. The favorable symptoms are the reverse of those above stated.

Treatment— This should be commenced by giving a mild laxative in order to evacuate the bowels of any irritating substance that may exist. The laxatives given should be

mild from the fact that in this disease there is almost unexceptionally diarrhea or a strong tendency to that affection - therefore the bowels should be gently cleared out, without producing irritation if possible. Among the best cathartics for use are castor oil or the sulphate of magnesia, the former is most generally preferable and if there be pain with diarrhea, laudanum to the amount of ten to twenty drops may be given with the oil - but when sourness of breath indicates the presence of acid

in the circulation, magnesia should be prefered. There are others that may be employed usefully as Rhubarb and magnesia or the Seidlitz powder according to the demands or nature of the case.

If the stomach be very irritable, or cathartics worry or depress the patient, the same object may be affected by enemata - these should be mild in the early stages - but when the disease is advanced and by impaired considerable, oil of turpentine may be advantageously combined.

Having evacuated the bowels the next thing to be done, is to obviate febrile symptoms- This may be done by venesection, when the pulse is full and strong, and there is a sanguineous determination to the brain- or where inflammation or congestion of other vital organs is imminent, General bloodletting is however frequently contraindicated and if improperly resorted to, may do great and irreperable injury- Though in some cases it is indispensably necessary.

As this disease generally runs

a certain course, and is in some cases very protracted, it behooves the practitioner to use all practicable means for the purpose of husbanding the strength of the patient. If general bloodletting be employed, it is generally most useful in the earlier stage of the disease, being very seldom indicated after the first week; though local bloodletting or bleeding may be resorted to, at almost any stage of the disease, when indicated by active inflammation or congestion of particular organs.

Leeches or cups to the head, and to the right illiac region may be advantageously employed, where there are evidences of congestion in the first, or of inflammation, as evinced by pain and tenderness, in the second locality. Refrigerant diaphoretics should be employed from the commencement of the disease. Of these, the neutral mixture or effervescing draught with tartarized antimony may be given in the early stages of the disease, when the skin is hot and dry, and the pulse is not very feeble. In the later stages when the nervous symptoms begin to appear, spirit

of nitric ether may be added, and should the stomach or bowels be affected, small doses of laudanum or other preparations of opium may be very usefully combined.

Cold sponging if it does not chill the patient is an important remedy, and in cases attended with great debility, diluted spirit may be substituted for cold water. The internal use of ice is very grateful to the patient.

Cold applications to the head, by means of ice in a bladder, are very serviceable in relieving

the pain and delirium. It is strongly recommended by some authors to shave the hair off the head.

For pains in the abdomen with flatulent distention, small local bleedings followed by warm fomentations are highly useful. If there be pain or tenderness in any part of the abdomen as in the epigastrium or right iliac region cups or leeches should be applied. It is also highly recommended to cover the abdomen with large mush poultices, sprinkled with mustard or some other rubefacient.

If diarrhoea be present, it should be checked by opium either alone or in combination with ipicacuanha or some other astringent. Nervous symptoms may be quieted by the use of sweet spirit of nitre, Hoffmon's anodyne, camphor water or opium if it be not contra-indicated.

In the advanced stage of the disease, when the tongue becomes dryish, the skin dry and the urine scanty, a general deficiency of secretion, delerium or an increase of stupor, tympanitic abdomen, with an obtolement

of the vital actions, and without any diminution in the violence of the disease, mercury is the most reliable or effectual remedy, given so as to slightly affect the gums, but not so as to produce severe ptyalism. Large doses of calomel cannot be safely given - it is better to give minute doses of blue mass, given at short intervals, as, for example, a grain every two hours, until the desired effect be produced - Calomel may be used instead of the blue mass if preferred, to the amount of a quater of a grain.

tion during sleep is where quinine is especially demanded. In copious epistaxes, where the ordinary remedies fail, the plugging of the nostrils must be resorted to; and other symptoms must be treated as they make their appearance. In cases of peritonitis from intestinal perforation, the only hope is the free use of opium. To prevent the formation of sloughs from pressure, the patient's position should be frequently changed, small down pillows may be placed under the body and the head should be occasionally

bathed with spirit or protected by lead plasters. The condition of the bladder should be attended to and if there be retention of urine, it should be drawn off with a catheter.

The diet should be mild and unirritating in the early periods of the disease, becoming gradually more nutritious as the disease advances and debility increases. During convalescence it is extremely important to guard against improper diet.

From the influence of mercury the tongue frequently becomes moist, the skin relaxed and the other symptoms much alleviated— but should the symptoms not yield; especially should the tongue remain dry, and the abdominal distention undiminished, oil of turpentine should be used particularly in those cases where the tongue instead of gradually cleaning from the tip and edges, peels with its fur quickly and in large flakes first from the middle or back part of the surface, which is left smooth and glossy as if

deprived of its papillae. The oil of turpentine should be given in doses of from five to twenty drops every hour or two and continued for several days.

The debility existing in the advanced stages of the disease, is such as to call for the support of stimulants and cordials- wine-whey, milk punch, beef tea or essence, together with quinine or opium also the infusion of serpentaria with a little sweet spirit of nitre may be given if it agree well with the stomach. In cases of copious perspira-